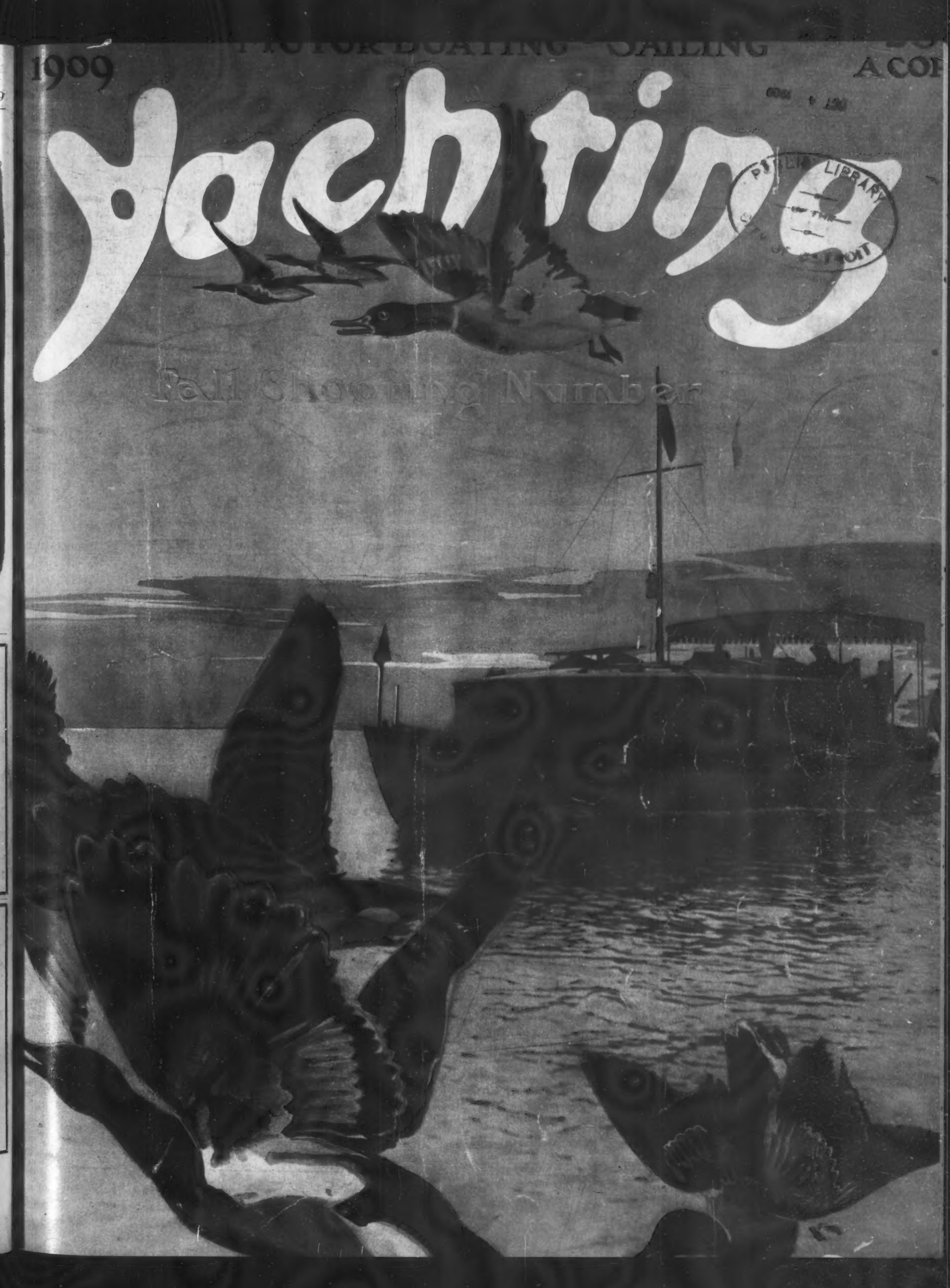
1909

MOTOR BOATING SAILING A COP

Yachting

Fall Showing Number



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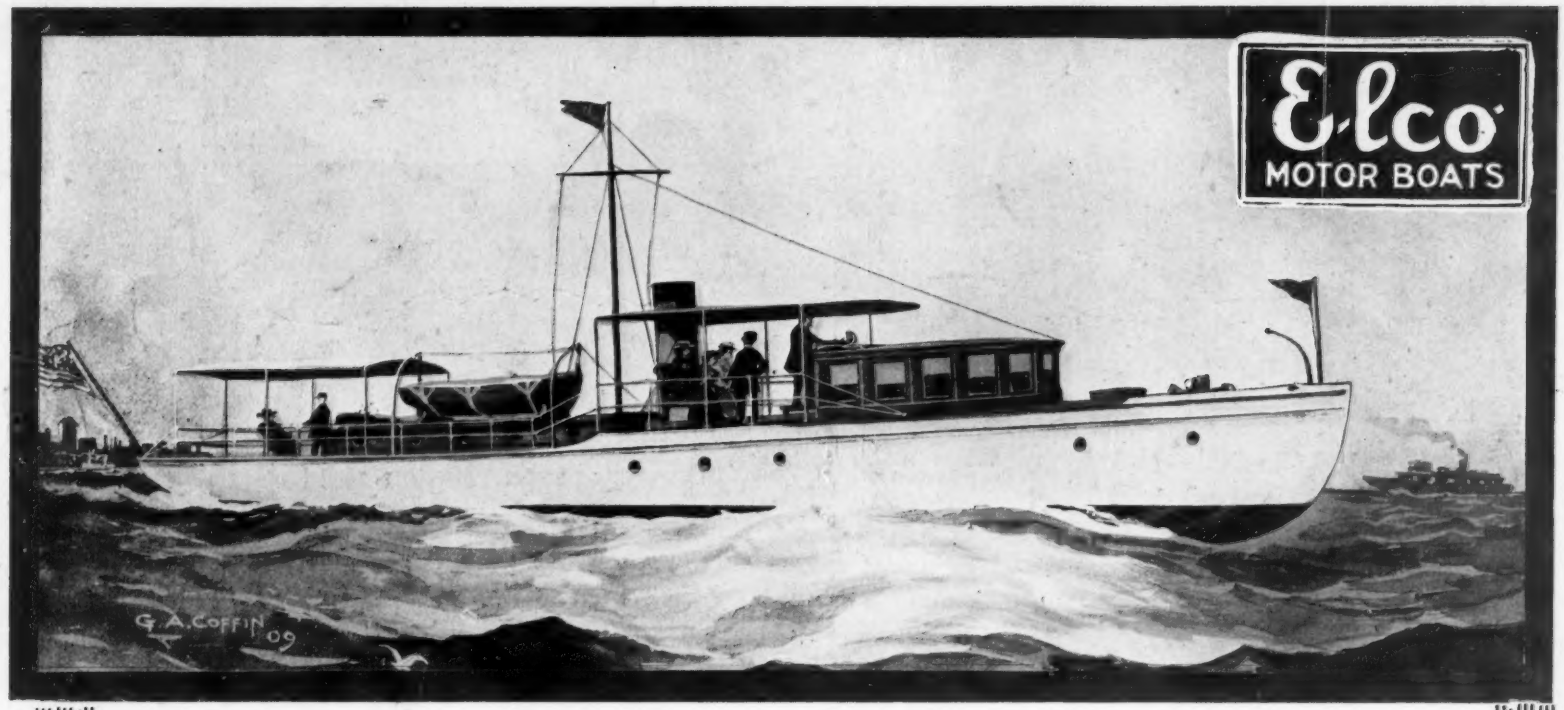

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TIMANDRA, CHAMPION 31-FOOTER OF MASSACHUSETTS BAY.

See page 311.

YACHTING

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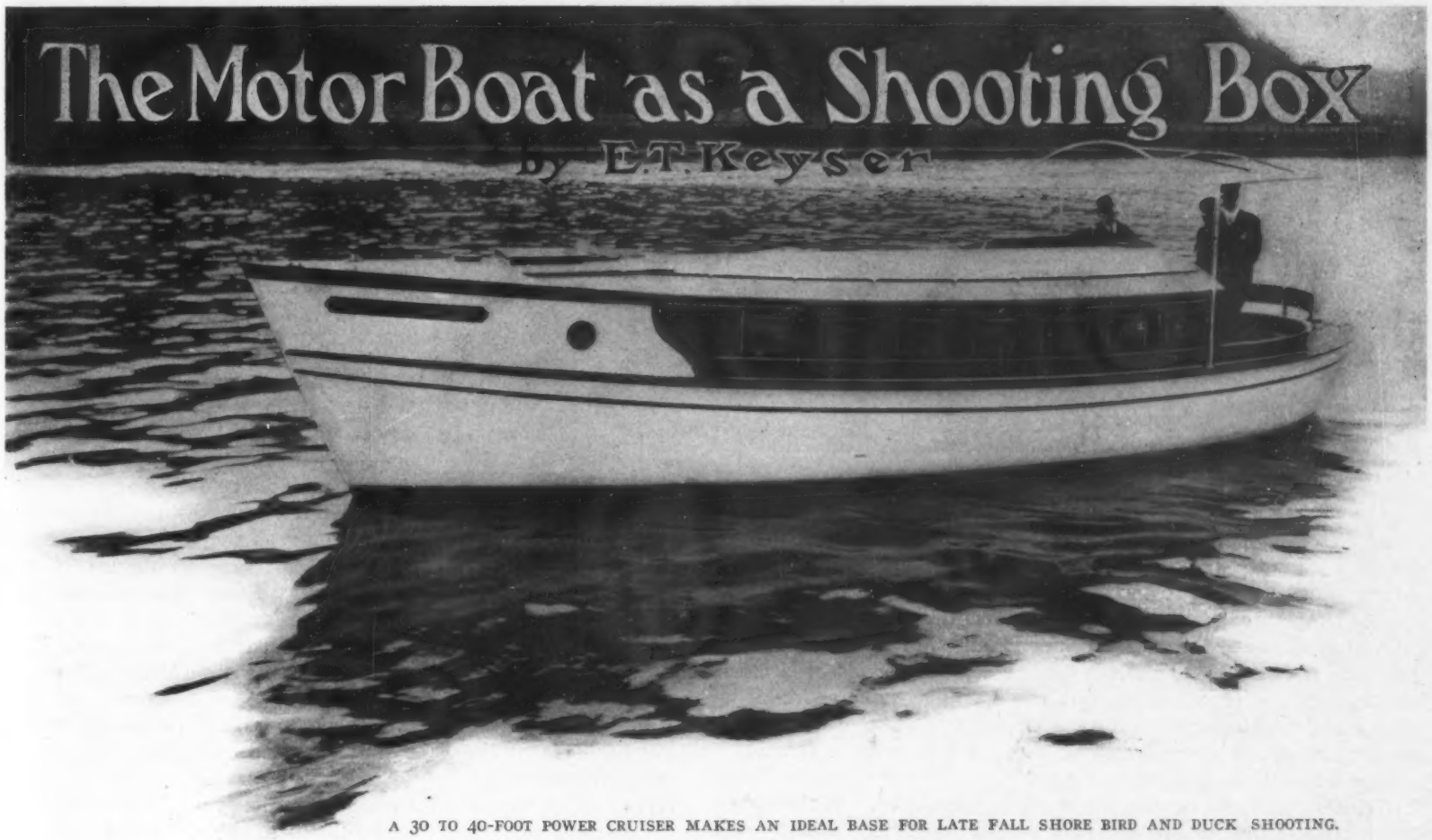
The Motor Boat as a Shooting Box

By E. T. Keyser



A 30 TO 40-FOOT POWER CRUISER MAKES AN IDEAL BASE FOR LATE FALL SHORE BIRD AND DUCK SHOOTING.

THE advent of the motor boat has brought within reach of the average sportsman such possibilities for shore bird and duck shooting as were formerly considered the exclusive prerogative of the members of the larger and more expensive game preserve associations, known as shooting clubs. For years our birds have become shyer and scarcer, and the numbers of those who have hunted them have increased from a scarcely to be considered handful to a mighty army of gunners.

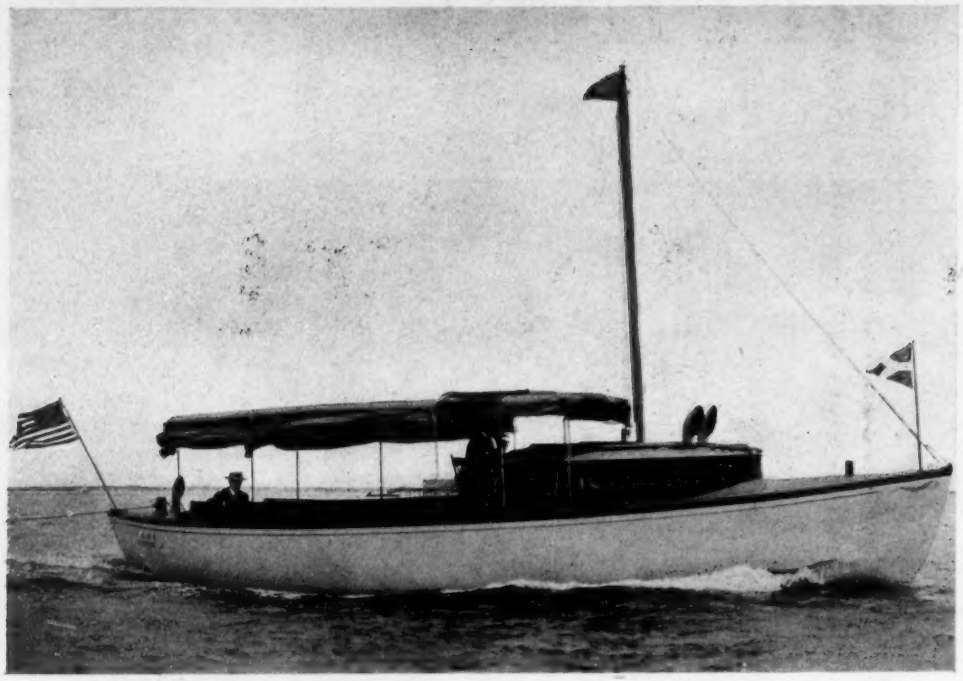
To-day it is possible for a landsman, after incurring a formidable list of expenditures, commencing with transportation charges and running through such items as hotel bills, guide hire, rent of decoys, boats and livery rigs, to arrive at some place where game and hunters may be found in about equal proportions.

The owner of a motor boat, however, is not dependent upon the usual means of transportation; neither is he obliged to put up at hotels and waste precious time in getting to and from the shooting grounds, which must, in the majority of cases, be somewhat distant from the resort at which he sleeps and takes his meals. His motor boat, anchored in some protected spot, serves to house him at a base of operations, and provides for the convenient storing of guns, ammunition, decoys and boats within a short pull of where the blinds are located. There is, moreover, a vast difference between a long walk or drive between the shooting grounds and the hotel, and the location of a likely spot for the day's shooting, and a short pull in the dinghy or sneak box to a motor boat snugly anchored around a neighboring bend or point.

Nor are these by any means the greatest advantages to be secured in the use of a motor boat for a shooting box. Many spots almost inaccessible via land routes, yet easily reached by water, furnish the very best kind of sport, for the very reason that their inaccessibility has caused them to become natural game preserves, where duck and shore birds, feeling secure from intrusion, have acquired the habit of gathering in goodly numbers. Such places are much more numerous than generally supposed by those who have not given the matter much thought; numerous enough, in fact, to warrant the equipment of the average cabin motor craft with guns, decoys and proper stowage space to contain them.

Curious as it may appear at first glance, the smaller the motor boat, within reasonable limits as to seaworthiness of hull and comfort in accommodation for passengers and outfit, the better she is adapted to this style of shooting trip. Draught is what decides into what nooks she may or may not pehetrate, so every inch that this draught may be reduced adds square miles to her radius of operation. Not that the draught should be decreased without due consideration of the fact that air and water are apt to break into war at short notice at that season of the year when our Northern ducking season is at its best. Therefore, the happy medium is that model which gives the greatest unrestricted radius of action combined with lines and draught calculated to withstand the rough weather apt to be encountered in cruising to and from the shooting rendezvous.

Cabin space also is an important item in late season shooting, for the open cockpit—the boat's real living room in summer—is now useless except as a place for the stowage of decoys, oars and such material for artificial blinds as may be carried. The



SIS II, A 40-FOOT BOAT USED FOR FISHING AND SHOOTING ON LONG ISLAND WATERS.

available cabin space must, therefore, be sufficient in area to comfortably allow of the party sleeping, cooking and eating under cover, and yet not be so great as to be difficult to bring up to a livable temperature within a reasonable length of time.

With a 28 to 35-foot raised deck or trunk cabin hunting launch, two men may enjoy themselves thoroughly on a series of shooting expeditions, commencing with the opening of the shore-bird season and continuing after duck until so late that the drain cocks on the circulating system must be kept open to prevent freezing except when the engine is running.

Neither the arms nor decoys need be expensive. Well-made hammerless guns, shooting closely and as accurately as desired. may be procured to-day for sums which would leave considerable change from a twenty-dollar bill; and, if the shooter should prefer the old hammer model, for still less.

For snipe-shooting a 16-gauge shotgun, weighing from 5¾ to 6 pounds, bored to give a fairly open pattern at 30 yards, is ideal. For duck alone, a 10-gauge, 8½ to 9-pound weapon, full choked, would be productive of the best results.

As a compromise for both varieties of game for those whose expenditure must be limited to the cost of one weapon, a 7¾ 12-gauge, full choked for duck, and using for snipe special loads which give an open pattern at 20 yards, will fill the bill. It will, however, prove a better duck than snipe gun, so one should decide as to which variety of game will be most sought, and in choosing a compromise weapon see to it that its least efficiency be along the line of its least possible use.

Decoys are a reasonably economical proposition to the motor-boat gunner. With a motor boat at one's disposal, a splendid assortment of decoys may be carried, and the difference in cost between the solid wood birds, which may be used in these cases where weight and bulk are of little moment, enable the purchasing of a far larger assortment than in those cases where, for reasons of transportation and convenience, the more expensive collapsible styles must be used.

With a motor boat, making from 7½ to 9 miles per hour, a pretty good radius of action is possible, and, should the shooting be found unsatisfactory in one location, it is a comparatively easy proposition to raise anchor and "mote" away for more promising fields.

The accommodation plans reproduced herewith show a boat designed by Morris M. Whitaker, of New York City, for shooting and fishing along the south shore of Long Island. It represents a very practical combination of three distinct types of boat, having a raised deck forward, which allows her to head up into a heavy sea without swamping everything on board, a trunk cabin allowing a good view of three-quarters of the horizon, and large windows at the sides, giving a well-ventilated cabin on warm days.

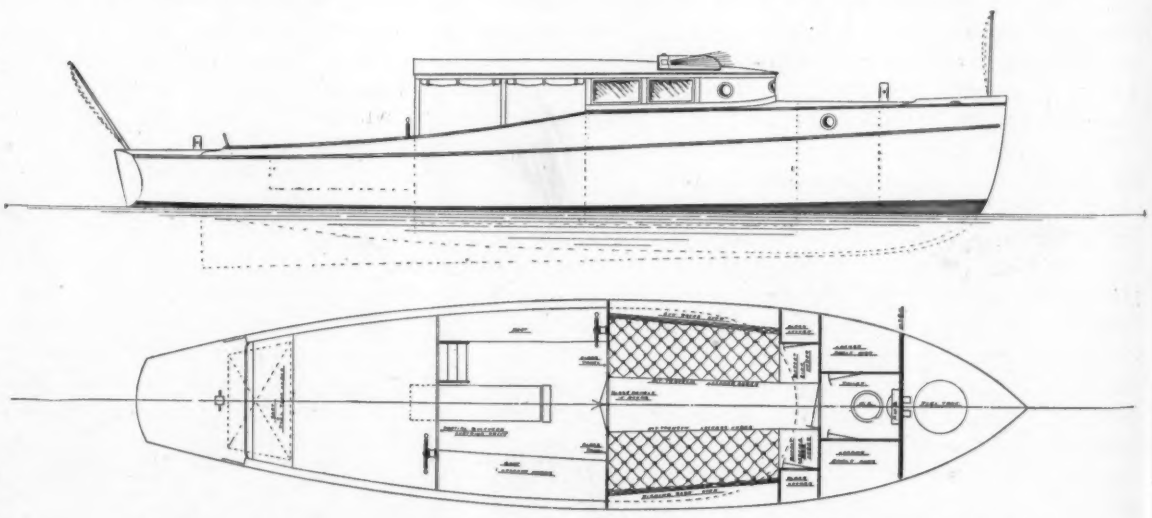
In combination with these advantages she has an engine room under a standing roof which may, by the simple raising and lowering of side curtains, be made as open or as snug as the different weather conditions may render desirable.

She is 34 feet in length over all, has 8 feet of beam, and the specifications which governed her design were that she must have comfortable sleeping room for a party of two, with full head room of 6 feet and good facilities for the storing of provisions and for cooking.

As may be seen by the layout, her 60-gallon fuel tank is right up in the eyes of the boat and separated from the cabin by a watertight bulkhead.

Aft of this comes a toilet room 3 feet long, with lots of locker space on each side. Next comes the main cabin, 8 feet in length, with buffet, sink and glass locker forward on the port side, and a buffet with chafing dish underneath and another glass locker opposite. The cabin trunk runs just far enough forward to allow of standing erect when cooking.

The cabin has two extension transoms with lockers underneath. There are gun racks on the port and storage space for fishing rod on the starboard side. The cabin is separated by a bulkhead and glass panel doors from the semi-open cockpit. This latter space is a trifle over 6 feet in length, and in the center of it



PLANS OF A 34-FOOT BOAT DESIGNED ESPECIALLY FOR SHOOTING AND FISHING AND CONTAINING A NUMBER OF NOVEL FEATURES.

is installed a 25-horsepower, 4-cylinder engine, which gives the boat a speed of 10 miles per hour. On each side of the engine are seats, and the compartment is covered by a standing roof formed by an extension of the roof of the main cabin. Canvas curtains with celluloid windows at the sides and the combination of bulkhead and curtains at the after end, allow the engine room to be converted, at short notice, into a closed cabin.

SHOOTING FROM A BLIND. THE MOST INACCESSIBLE SPOTS ALONG SHORE ARE BEING BROUGHT WITHIN EASY REACH BY THE POWER CRUISER.

Aft of this is a large, square-ended, self-bailing cockpit, underneath the rear transom seat of which is the fresh-water tank. While the appearance of the boat is somewhat unusual, her snug comfort, combined with her splendid storage space for supplies and equipment and the ease with which she can be handled by a crew of one, makes her an ideal ducking boat. She should be able to stand almost any kind of sea, and she can be made as warm or kept as cool as the varied condition of the weather renders desirable.

An almost complete reversal of the arrangements of the boat just described is shown in Sis II, owned by Mr. Eben Stevens, which has been used extensively by him for shooting and fishing purposes in Long Island waters. In Sis the engine is housed, and the sportsman occupant can convert her large after cockpit into a cabin by dropping her side curtains.

Sis is 40 feet in length over all, has 8 feet 6 inches beam, and draws 3 feet of water. The cockpit is self-bailing, and in the after end of the cockpit is a large refrigerator masquerading as a stern seat. She has one pipe berth forward, and she carries a jury rig, consisting of spritsail and jib.

To those who are about, for the first time, to use their motor boats as a shooting box, a short caution will not come amiss. Discard your handsome and expensive stiff leather gun case, substitute for it one made of waterproof canvas, and, before placing your guns in this, incase both barrels and stock in a set of chamois covers, made for this purpose, first thoroughly coating barrels, both inside and out, and all metal work on the stocks with one of the rust-repelling gun greases, which may be procured at any sporting goods establishment. By these precautions, guns are protected from corrosion, and an occasional inspection will make them absolutely impervious to rust.

A New Type for Southern Cruising

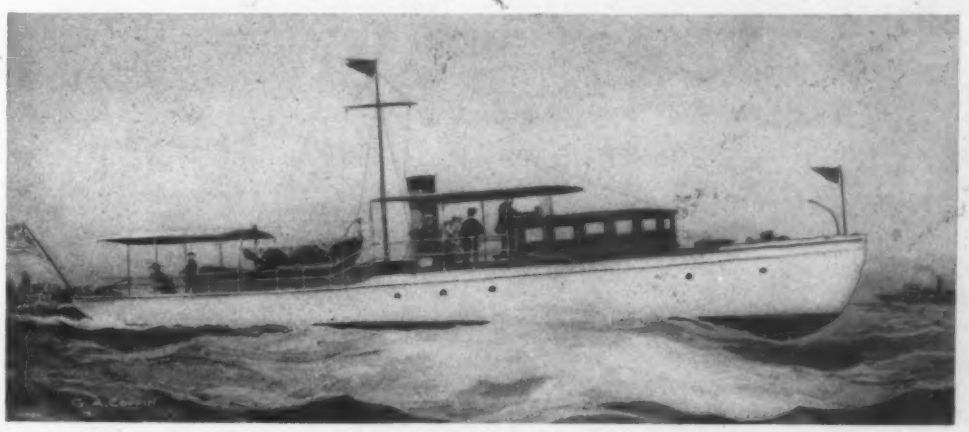
THERE has recently been designed, and is now in the course of construction, a boat for Southern cruising and work on the Great Lakes that contains a number of novel features which should be of interest to our readers, especially those who contemplate building such a craft for similar use. This boat is being built for Mr. J. K. Stewart, of Chicago.

The boat itself is a combination of the flush deck and trunk cabin types, with a raised pilot house forward, and it was aimed to produce a seaworthy model, with light draught and a maximum of light and air below. The model of the boat is particularly good, there being considerable flare to the bow and good freeboard forward. A liberal amount of deck room has been provided both on the bridge deck amidships and on side and after decks. A party of eighteen can be comfortably seated on chairs in this space.

The general dimensions of the boat are: Length over all, 78 feet; load waterline, 69 feet; beam, 14 feet; draught, 3 feet 6 inches.

The interior arrangement is noteworthy, inasmuch as it gives a well-arranged, roomy boat, with the location of the weights in the best place for seaworthiness and good construction. The motors are installed amidships, and are separated from the owner's quarters by two watertight bulkheads. Gasolene tanks of 200 gallons capacity each are placed in watertight compartments on either side of the motors. The power consists of two six-cylinder Standard engines of 40 horsepower each.

The forecastle is arranged for a crew of four, immediately aft of which is the galley, fitted with stove, water heater, ice-box, etc. The dining-room is in the forward deck house, and is of sufficient size to seat eight persons at table. The owner's quarters are aft, with a stateroom on the starboard side and bathroom opposite. This stateroom is finished in mahogany, with dressing table and ample locker space. The main saloon is arranged with extension transoms, which serve for berths at night, being separated by portiers.



A BOAT DESIGNED FOR SOUTHERN CRUISING.

Twelve miles an hour is guaranteed, but a somewhat better speed is expected by her builders and designers, the Electric Launch Co., of Bayonne, N. J.

START OF THE FIRST RACE. ELLEN LEADING, WITH JOYETTE ON HER WEATHER, FOLLOWED BY THE GERMAN BOATS HEVELLA, SEEHUND II AND MARGARETHE, WITH WOLF DOWN TO LEEWARD.

The German-American Sonder Races for 1909

By HERBERT L. STONE

Photographs by W. B. Jackson, F. A. Walter and others

IT is fitting, perhaps, in writing of the recent international *sonderklasse* races off Marblehead to begin at the tail end of the story and tell, when Ellen crossed the line in the fifth race of the series and the Germans saw their last desperate chance of victory swept away, how manfully the Teutonic sportsmen took their defeat and how heartily they congratulated the winner. Throughout the long, hard-fought series, when the tide of adversity was sweeping against them, they were serene and almost cheerful as they saw their chances of winning grow slimmer and slimmer. There never was an international race where the good-feeling, friendliness and spirit of fairness was so apparent; and if a poll of the spectators that lined the course in every kind of craft, from "Charley" Taft's dory to the largest steam yacht, had been taken, it is likely that 50 per cent. would have gone on record as wishing to see the Germans carry the mug home with them—at least so it would seem if we can judge from the expressions voiced. It was a spirit that would make America's Cup racing committees of the past blush to the very toes.

For once a foreign racing contingent had no reason to complain of the weather, for ideal racing conditions existed during the entire week or more of racing, the winds varying from moderate and strong, with a reefing breeze for one race, to light southwesterly, the prevailing winds at Marblehead at this season of the year. Not once was a race called off for failure to finish within the time limit of five hours, and only once was the start postponed for lack of sufficient wind to send the boats away. During the series the boats were asked to meet all conditions usually found in summer.

But to get back to the story of the struggle itself, which Joyette, beautifully sailed by young "Bill" Swan, won. After careful selection in a series of trial races held off Kiel, the three German boats picked to meet an American team of equal number for the cup presented by President Taft were: Hevella, representing the Verein Seglerhaus am Wannsee, and sailed by the genial Otto Protzen, who had so endeared himself to Marblehead yachtsmen when he was here in the Wannsee in 1906; Margarethe, owned by Mr. H. Kirsten, and sailed by Captain Tietgens, and Seehund II, owned and sailed by Mr. Otto Berghoff. These boats were all from designs by Max Oertz, the only German designer of international repute, and only one of them was a 1909 boat, the others having been built last year.

The three American boats that had survived the elimination races, in which nineteen boats started, were Joyette, designed by Chas. D. Mower, and owned by Commodore Wm. H. Childs, of New York; Wolf, a Starling Burgess boat, owned by Caleb Loring, of Boston, and Ellen, a Boardman-designed craft of 1906, but remodeled and re-rigged for this year's event and owned by C. P. Curtis.

The conditions governing the contest are too well known to need repeating here, and the German-American race committee of the Eastern Yacht Club having the series in charge, headed by Henry Howard, had done their work so well and with such attention to detail that there was never a better managed race sailed on this side of the Western Ocean. The rules governing the number of races for the President Taft Cup provided as follows: "This cup will go to the owner of the yacht which first wins three races or wins the fifth race of the series. In case the deciding race is the third, the winner will not be allowed to compete in further races. If the deciding race is the fourth, the winner is excluded from the fifth. Should the first four races not have resulted in a decision, only the winners of these four

JOYETTE, WINNER OF THE PRESIDENT TAFT CUP.

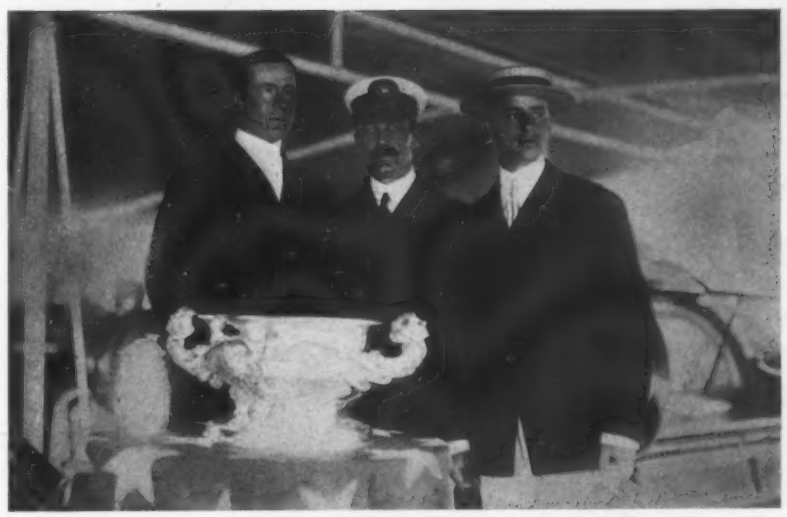
HEVELLA.

races can take part in the fifth race. Should a decision not be reached in the fifth race, owing to two yachts each having won two races, then a sixth and deciding race shall be sailed between these two yachts." As it turned out, it took six races before Joyette finally landed the cup.

For some weeks the German boats had been tuning up off Marblehead, but the American boats had been requested by the committee to keep away from them while under way, and up to the time of their coming to the starting line on the morning of August 30 the relative speeds of the boats were not known. The results of the first two contests, in which all three of the American boats finished ahead of the Germans, seemed to place the final outcome, as far as the latter were concerned, beyond doubt. These races were sailed in fresh breezes, and one in a lumpy sea that was supposed to be similar to the conditions at Kiel, and just what the Germans wanted. On the third race, however, all calculations were upset, and the wise ones who had been going around with an "all-over-but-the-shouting" air received a severe jolt. For in a strong breeze, which required a reef at the start, but which dropped away to a streaky westerly, Hevella and Margarethe walked away from the American boats in going to windward (a point of sailing in which it was supposed we were particularly strong), obtaining such a lead that neither Joyette, Ellen nor Wolf could catch them on the reach, and finishing well ahead of the American team. It was a great race, the greatest of the series, and the cheer in the German camp at the Eastern Yacht Club that night was infectious. On top of this, in the next day's race, in the lightest of airs, Hevella ran away from the American boats in the run down the wind on the first round and turned the home mark with a lead that caused many an uneasy hour on the attending fleet. On the second round, however, Joyette found a streak of wind on the windward leg that enabled her to look up higher—a shift, by the way, that her crew had seen the signs of, so it cannot be attributed entirely to luck—and she turned the windward mark some six minutes ahead of Hevella, having come up from fourth position. This lead was too much for the German boat to overcome, though she was sailed well on the run home.

The difference in size of the American and German boats was most striking when they were under sail—more so than the actual difference would lead one to suppose. When paired with an American boat the German looked perceptibly smaller, both as regards hull and sails, though the actual sail area was not so very much less. The hulls of the Germans were prettier and more pleasing to the eye, but they seemed to lack the power of the American boats. The long, broad sterns of our craft, carried out at nearly the full width of the boat, gave an added power when down to the sailing lines that the sharper, finer sterns of the German boats did not possess.

The first race was started at 11 a. m., August 30, and when the six little boats appeared at the line there was a fresh northwester blowing off the land, cresting the tops of the short blue seas close to shore and causing quite a jump several miles off. Most of the attending fleet of two hundred-odd yachts were reefed, though the little racers carried full sail.



THE PRESIDENT TAFT CUP AND THE DESIGNER, OWNER AND SKIPPER OF THE WINNING BOAT.

The committee started the race well off shore on a triangular course of 2½ miles to a leg, sailed twice over—a total of 15 miles. Throughout the series this course alternated with a windward and leeward one of 12 miles. At the gun Joyette and Ellen got away together, with Joyette to windward of the Boston boat and the Germans right behind them. Soon after the start Seehund II was seen to shoot up into the wind with the luff of her sail slack, and it was seen that she had parted her throat halyards. They sent a man aloft, and after some work repaired the damage, and although she had lost some 12 minutes by the accident, Capt.

MARGARETHE.

WOLF.

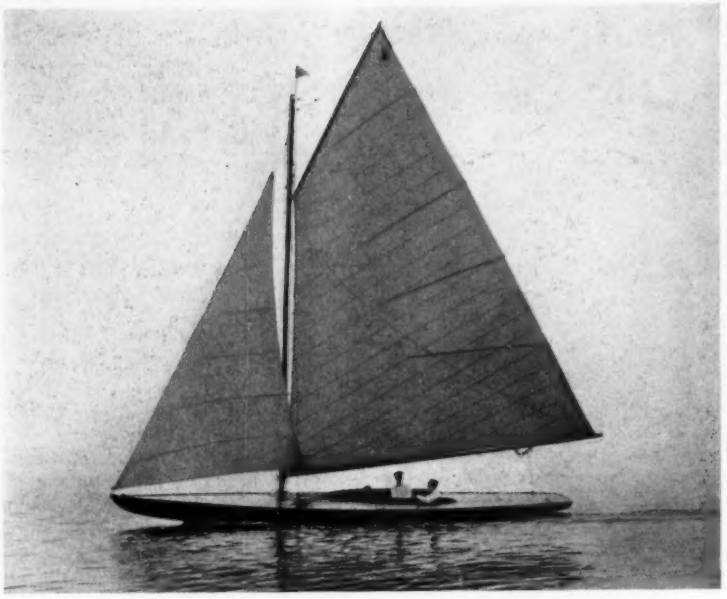
Berghoff pluckily kept on, though hopelessly out of it. The American boats showed their superiority in windward work at once, and all three turned the first mark ahead of the Germans. The next two legs were reaches, and Joyette immediately showed her worth on this point of sailing, turning the second mark 29 seconds ahead of Wolf, with Ellen 11 seconds astern of the latter and the Germans well in the rear.

The wind was lightening, however, which favored the American boats. Joyette and Ellen continued to draw away from the others, and were over a minute ahead of Wolf at the completion of the first round and two minutes ahead of the nearest German, Margarethe. The second round was a repetition of the first, with the exception that our boats drew still further ahead of the Germans. This may have been due to the lightening of the wind, although there was still a whole-sail breeze with a bobble of sea—just the weather that was supposed to suit the Germans. Joyette held her lead, even increasing it somewhat on the reaches, and finished amid a din of whistles that would have done honor to a successful America's Cup defender. The following is the order of finishing and the elapsed time for the 15 miles: Joyette, 2 hours 35 minutes 36 seconds; Ellen, 2 hours 38 minutes 8 seconds; Wolf, 2 hours 40 minutes 48 seconds; Margarethe, 2 hours 43 minutes 50 seconds; Hevella, 2 hours 49 minutes 53 seconds; Seehund II, 2 hours 55 minutes 57 seconds.

It was rather surprising that Margarethe did so much better than Hevella, as the latter was supposed to be the faster of the two. Hevella's rather poor showing may have been due to an accident that her skipper, Mr. Otto Protzen, sustained some days previously, which injured his knee so that it was with difficulty he got around in the little boat.

The next day the boats were at the line promptly, and were sent away at 11.10 in a light southeasterly wind, which had kicked up quite a slop of sea during the night, into which the little fellows slopped and splashed. The Germans were somewhat disappointed at the lightness of the weather, but to the American team the conditions were most welcome. Young "Bill" Swan, of Joyette, had nothing but smiles on his face as he glanced aloft at the windless sky of early autumn.

The boats were sent away promptly, Protzen, in Hevella, getting the best of the scrap and crossing in the lead to windward 5 seconds after the gun. Hevella maintained her lead for some time; but the wind lightened somewhat and Ellen gradually gained on her, and 15 minutes after the start she came about on the other tack, and when the boats drew together Ellen crossed the bows of the rest of the fleet. This lead she maintained to the windward mark, which she turned nearly a minute ahead of Wolf and over two ahead of Joyette, with the German boats in the ruck. In approaching the mark Seehund was close up to Joyette, and in turning evidently supposed that she had established an overlap on the Childs boat. The skipper of Joyette thought otherwise, and did not give way, forcing the German on the wrong side of the mark, where she was obliged to jibe and round again properly. By this time the other German boats were upon her and crowded her in so that she fouled the mark. Her skipper ran down the wind to the home mark, where he withdrew; and while he did not protest Joyette, the committee took the matter up, and subsequently announced that Joyette was within her rights and had not committed a foul.



SEEHUND II.

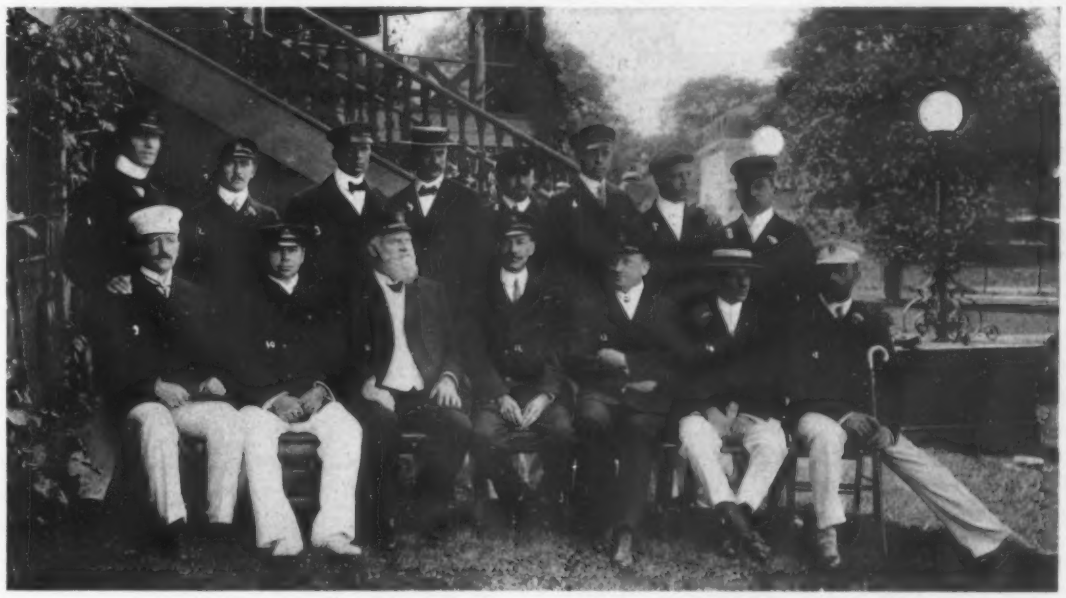
The boats maintained their relative positions on the run and rounded the home mark in the same order. The breeze was now freshening, which suited Caleb Loring, in Wolf, and he and Curtis, in Ellen, had a great scrap to the windward mark, which Wolf finally turned in the lead by 39 seconds. On the run back, however, in a breeze of about 15 miles strength, Ellen caught Wolf about half a mile from the finish, and in a great race crossed the line ahead by only 16 seconds.

The elapsed time of the yachts was as follows: Ellen, 2:21:41; Wolf, 2:21:57; Joyette, 2:22:52; Hevella, 2:24:41; Margarethe, 2:29:44.

ELLEN.

The next race was Thursday, September 2, and when the Germans turned out they found a ripping nor'wester blowing, that caused a broad grin to appear on their faces—a grin that was to bear fruit, as subsequent events showed. It was coming down hard when the boats appeared at the line at 11 o'clock, and all of them had reefs tucked in, while the flying spray drenched the crews. The Germans used the rolling reef which winds the foot of the sail around the boom, which twists upon a swivel at the gooseneck. The advantage of this was apparent when the boats shook out later in the race.

The boats crossed well bunched, with Hevella again to windward, and seemingly in the best position. Soon after the start the boats split tacks, and all the way to the windward mark their relative positions could only be told when they came together. The first time this happened Margarethe and Hevella were seen to cross the bows of the American boats, and all the way to the mark they continued to draw away in the hard thresh to windward. Margarethe rounded first, 9 seconds ahead of Hevella and over a minute ahead of Joyette, who was followed by Wolf, Ellen and Seehund II. Once around the mark, with sheets started, Joyette went after the Germans, footing like a scared hare, and before the second mark was reached had caught and passed Hevella, and was only 14 seconds behind Margarethe. Soon after turning she caught the flying German, and rounded the home mark on the first round with a lead of over a minute on Margarethe, who was followed by Hevella, Ellen, Wolf and Seehund.



THE COMMITTEE, UMPIRES AND SOME OF THE CREWS OF THE COMPETING YACHTS.

1. Dr. Serini.
2. Mr. Kretzschmar.
3. Mr. Koch.
4. Mr. Kirsten.
5. Captain Tietgens.
6. Mr. Krogmann.
7. Mr. C. D. Mower.
8. Dr. Rakenius.
9. Mr. Berghoff.
10. Mr. Henry Howard.
11. Admiral Barandon.
12. Vice-Commodore Clark.
13. Captain Retzmann.
14. Mr. W. W. Swan.
15. Mr. Protzen.

Here young Swan made what seemed his only mistake of the series. He allowed the Germans to split tacks with him and get away. In the face of the showing the latter made in the previous windward leg, this seemed like bad judgment, as he had a good lead and should have kept between them and the mark. In the second windward thresh Hevella and Margarethe again drew ahead, being beautifully sailed, the leading boat, Margarethe, turning a minute ahead of Wolf, the leading American. Joyette had dropped back to fifth place. This lead the Germans never lost on the reach and run home, though Hevella passed Margarethe on the last leg and crossed the finish line a minute ahead of her. Joyette dropped back to last place, due to the lightening and streakiness of the wind. The elapsed time follows: Hevella, 3:09:53; Margarethe, 3:10:52; Wolf, 3:12:07; Seehund II, 3:12:25; Ellen, 3:12:30; Joyette, 3:12:40.

So far the winds had all been rather above the average for the season at Marblehead; but the fourth race, the next day, found a light sou'wester, which shifted to southward, and a smooth sea—typical autumn weather. It was again Joyette's day, as she found an advantageous streak on the second windward leg, and turned a seeming defeat into a victory, as has already been told. Ellen did the best on the first windward leg, only to be passed by Hevella, who finished the first round 8 seconds in the lead. The elapsed time of this race was as follows: Joyette, 3:14:06; Hevella, 3:18:16; Ellen, 3:20:56; Margarethe, 3:24:56; Seehund II, 3:25:26; Wolf, 3:27:06.

By the terms of the race this was the last event in which all the boats participated, those being eliminated which had not won a race. This left only Joyette, Ellen and Hevella in the fifth race, which was sailed Monday, September 6. The wind was light from the northwest as the boats sailed out to the starting line, and, as it was a triangular course, the chances seemed to favor Joyette.

The wind was very light, and the start was postponed until there should be more of it. At 11.30 the warning signal was given, and at 11.40 the boats were sent away. Joyette, evidently fearing the German boat, stuck to her at the start, and they went over close together, Hevella on Joyette's weather quarter. Joyette soon pulled clear, and, as the boats split tacks and came together again, both Joyette and Ellen crossed the German's bow. It was a close race to the mark, however, and the three boats all rounded within 50 seconds of each other, with Ellen leading, followed by Joyette and Hevella. On the second leg the wind hauled more to the southward and spinnakers were set, when Hevella immediately began to draw up on Joyette. The relative positions of the boats did not change until the windward leg on the second round, when the German boat crossed Joyette's bow. The wind was streaky and soft in spots, and it was noticed that the minute it lightened the Childs boat lost her headway, while Hevella carried her way until she ran into another streak. Ellen was pulling away all the time and Joyette falling further behind. The boats crossed the finish in this order: Ellen, 2:44:25 (elapsed time); Hevella, 2:47:08; Joyette, 2:49:21.

By this race Hevella was eliminated and Ellen and Joyette were left with two wins each to fight it out the next day. The breeze was southwesterly and light as the boats came to the mark, and it looked like Ellen's weather on a windward and leeward course. The crew on the Bensonhurst boat were too smart, however, and the excellent handling she received won the race.

The boats were sent away promptly at 11.10, with Joyette in the weather berth seeking to cover the Boston boat, which was some distance to leeward of her. Joyette soon worked out to weather, while Ellen was sailed with a rap full, and, while footing the faster, fell off to leeward. Young Swan took advantage of every puff to eat out to windward, and as they neared the outer mark it was seen that he had quite a lead, and he finally turned, 28 seconds ahead of the Boston boat. On the run back Ellen picked up 9 seconds of this time, and it was as pretty a race as one would wish to see. On hauling the wind again Joyette back-

(Continued on page 332.)

THE START OFF ALEXANDRIA BAY.

The Gold Challenge Cup Races at Alexandria Bay

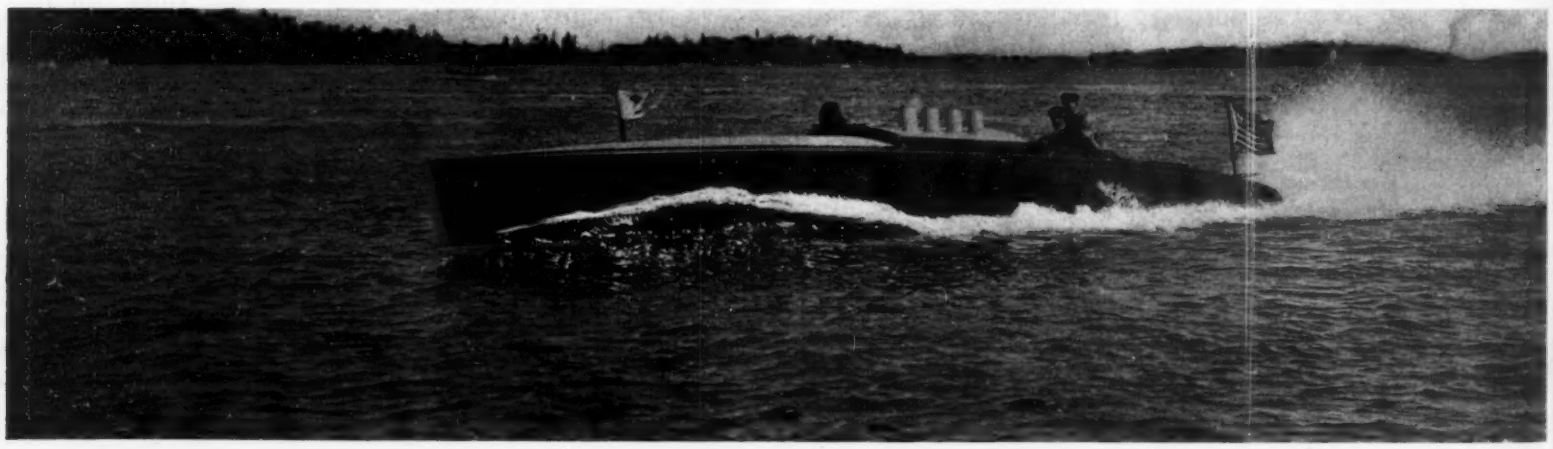
By LAWRENCE LA RUE

THAT most coveted of all motor boat trophies, the gold challenge cup offered by the American Power Boat Association, is still in the possession of the Thousand Island Yacht Club, having been successfully defended by E. J. Schroeder's Dixie III in a series of races covering the three days from August 19 to 21. While accomplishing this Dixie broke all fresh and salt-water motor boat records for craft under 40 feet in length, and completed the 32 miles of the full course on the last day in 58 minutes and 25 seconds, or at the rate of 33.02 miles per hour. In addition to establishing this new record the races were remarkable for their freedom from accidents to either contestants or spectators, the perfect management, and the wonderfully smooth and consistent performance of every boat entered. All of the four boats which started completed the 32 miles of the course on each of the three days of racing and, so far as the judges or spectators could determine, there was not an irregularity of explosion in a single cylinder of any of the boats throughout the entire contest.

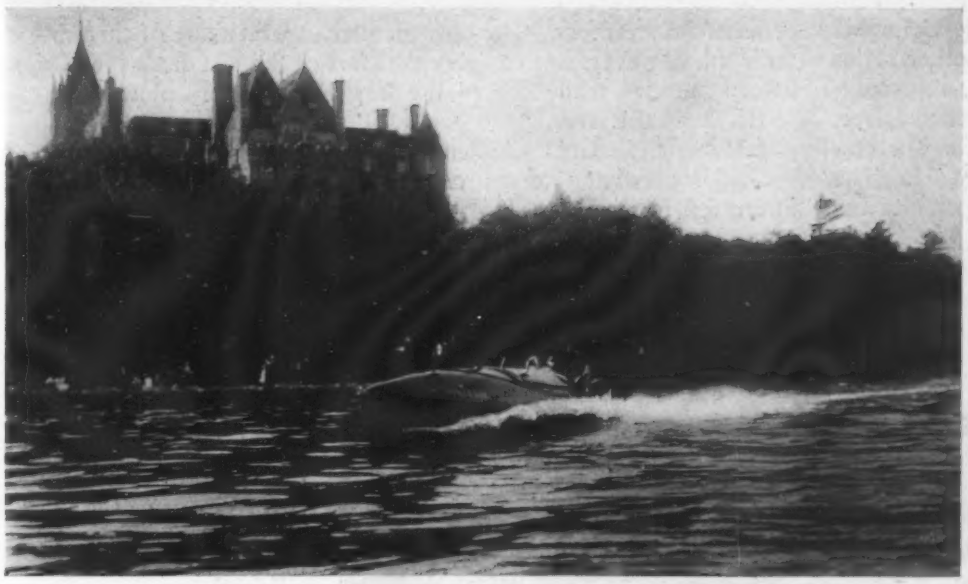
The Thousand Island Yacht Club course was changed somewhat to meet the requirements of the race and extended five miles downstream from a point opposite the Crossmon House, at Alexandria Bay, to the middle of the American Channel, opposite Ironsides Island and return. The start of the circuit, or the down trip, was made along the eastern shore of the American Channel, while the return was made along the opposite side, all buoys being held to port. Although the channel is rather narrow at this point as compared with the width at Chippewa Bay where the races have been held for the past four years, the buoys marking the turns were so arranged that no sudden swerves were made necessary in order to keep in the course, and all of the curves could be rounded at full speed. A circuit of this course as laid measured $10\frac{2}{3}$ miles, and three laps, or a total of 32 miles, constituted a day's race.

The four boats which contested for the cup throughout the three days of racing, with the clubs that they represented, were as follows: Dixie III, Thousand Island Yacht Club; Duquesne, Frontenac Yacht Club; Stranger, Chippewa Yacht Club, and Jan, Gananoque Yacht Club. Two other boats—Pawnee, of the Clayton Yacht Club, and Buffalo-Courier II, of the Motor Boat Club of Buffalo—appeared among the list of entries, but were withdrawn before the start of the first day's race. Great disappointment was expressed because of the non-appearance of the latter, as the reputation that she had gained for speed at the Palm Beach races last winter indicated that, should she enter, the contest between her and Dixie would be one replete with thrilling and exciting incidents. A telegram, however, received from her owner, W. J. Connors, on the second day of the race announced the fact that her engine builders had not completed some changes they were making, and all hopes of her entering the contest were thus blasted.

The three competitors of the Dixie were boats well known to the residents and visitors at the Thousand Islands, and while



DIXIE III, THE WINNER.



DUQUESNE, THE FRONTENAC YACHT CLUB REPRESENTATIVE.

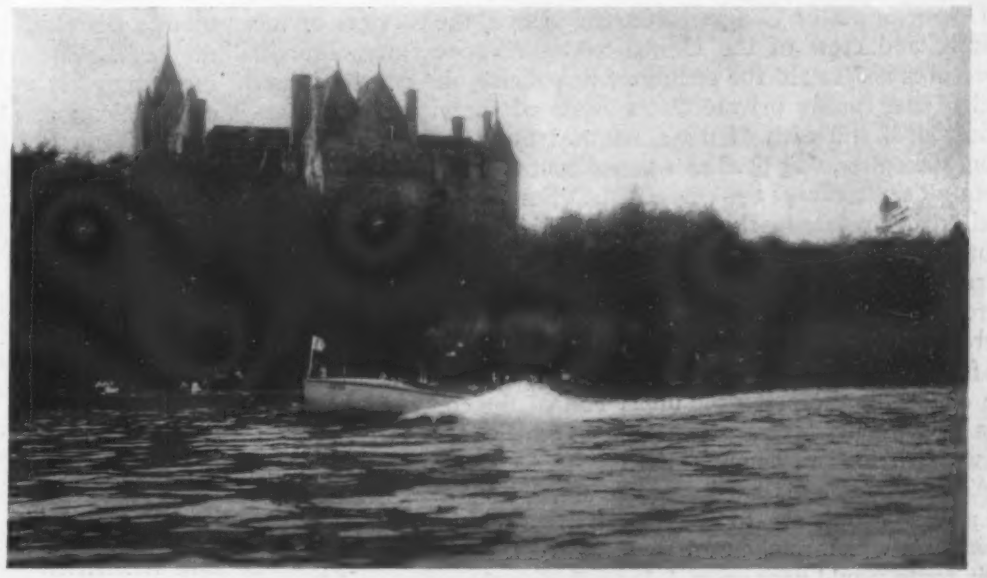
their previous performances had not demonstrated the possession of any speed such as the Dixie was capable of attaining, their appearance as challengers made it certain that game fights would be made for second and third positions. Dixie early demonstrated her ability to win the cup and, barring accidents, the race was conceded to her from the first by a majority of the spectators. The number of large and small craft of all kinds anchored along the course or near the starting line indicated, however, that there were thousands who considered that a well-run motor boat race is a sight in itself—even though the result may be a foregone conclusion—and those who watched had a few thrills added to the pleasure of seeing a perfectly run contest.

A flying start was used by all of the contestants on each of the three days, and in negotiating this the Duquesne proved to be the superior of all of her rivals. She was the first to cross the line in the first two starts, while the beginning of the last race was so even that there was no first or last. In the first race, however, Duquesne was able to maintain her advantage over Dixie, which started third, for only a part of the first round, and the end of this lap saw the defender leading by 1 minute and 23 seconds. This was increased to 3 minutes and 17 seconds at the end of the second round, and Dixie won the day's event by a lead of 5 minutes and 24 seconds over her nearest competitor, which finished 3 minutes and 1 second ahead of Stranger. Stranger beat Jan by 50 seconds.

A little more excitement was caused on the second day, when, after a start in which all the other contestants had crossed the line ahead of her, Dixie rounded the finish of the first lap 25 seconds behind Duquesne. The Schroeder boat, however, seemed to be running easily, and it was the opinion of those who had seen her in the races of last year that her engines were not "opened up." This opinion was verified when, at the end of the third and last lap, she crossed the line 1 minute and 5 seconds ahead of her rival, who had been in the lead during the first third of the race. The contest was sufficiently close to be exciting, and when Stranger came in third but 58 seconds ahead of Jan, it was observed that the latter, although the lowest-powered boat in the race, was reeling off the laps with the regularity of clockwork, and ran a more consistent race during the three days than any of her competitors. Her fastest lap for any of the nine which constituted the three days' racing was made in 23 minutes and 53 seconds, while the slowest time for the same distance was 24 minutes and 40 seconds—a variation of but 47 seconds for each circuit of 10⅜ miles of the total 96 miles run. The time for these laps was so evenly distributed that the greatest elapsed time of any day's race for Jan was but 46 seconds slower than her fastest performance.

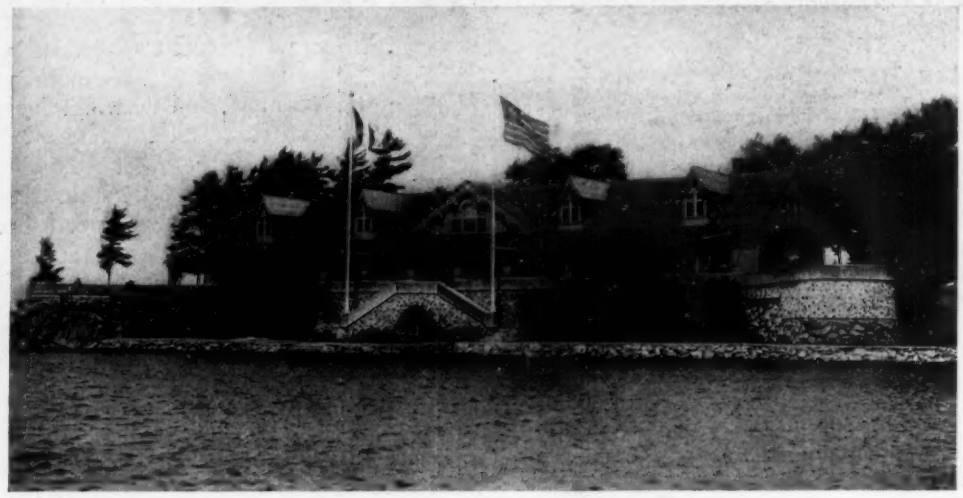
The start of the third and last day's race was an auspicious beginning for a record-breaking contest, and when all four boats crossed the line together on the boom of the gun a sight was offered the spectators which is seldom witnessed in a motor boat race. It was so even that, had any one of the racers been 10 feet in advance of the position she occupied, she would have been disqualified for crossing the line before the signal was fired. When Dixie completed the first round 2 minutes and 18 seconds ahead of Duquesne, 3 minutes ahead of Stranger and 3 minutes and 41 seconds in advance of Jan, and it was found by those who held stop watches that she had finished the first circuit of the course in 12 seconds over 20 minutes, or at the rate of 31.6 miles per hour, it was evident that she was not to be content with merely winning, but intended to go after a record as well. And she not only went after it, but she captured it, and in fresh water covered the 32 miles at a faster rate than has ever been done before by a boat under 40 feet in length. Her fastest lap was the second round, which she covered in 19 minutes and 18 seconds, or at the rate of 33.15 miles per hour. This race was run under perfect conditions of wind and weather, and all the boats, with the exception of Duquesne, bettered their previous days' records. Duquesne, however, still managed to maintain the position of second, which she had held during the previous contests, and finished 21 seconds ahead of Stranger, which, in turn, defeated Jan by 2 minutes and 35 seconds. It will be observed that the order of finishing was the same for each of the three days of racing.

By the winning of this season's races the Thousand Island Yacht Club retains the cup, which it wrested from the Chippewa Bay Yacht Club last summer, for another year, and in consequence the next contest for this trophy will be held over the same course under the auspices of this club. The Gold Challenge Cup was first offered by the American Power Boat Association June

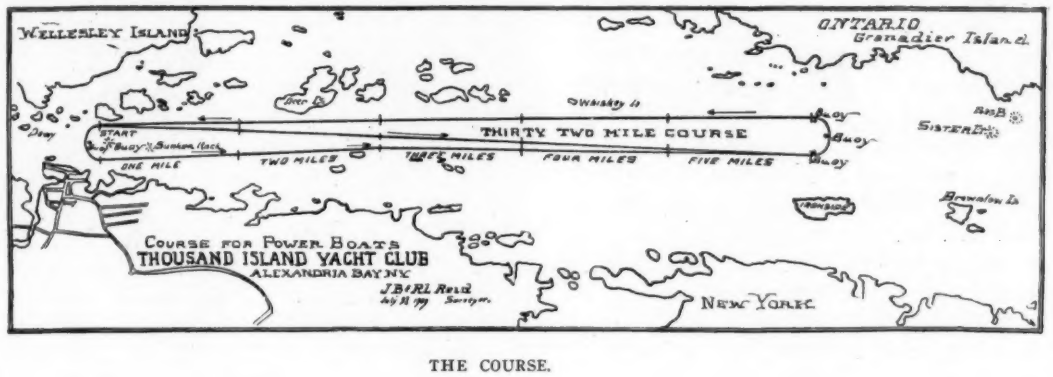


JAN.

25, 1904, and was won by Standard, representing the Columbia Yacht Club. On September 25 of that same year, another series of races was held, which was won by Vingt-et-Un, representing the Chippewa Bay Yacht Club, on the St. Lawrence River. Under the handicap rules then in vogue the cup was successfully defended for three years by Chip I and Chip II. The famous Chip III was built last year to defend the cup under the new free-for-all rules, which allowed all boats to compete, provided they were under 40 feet in length. The defender was equipped with two six-cylinder motors driving twin screws, and the peculiar arrangements of her dozen exhaust pipes, which projected high in the air above her bow deck, led her to be dubbed "the organ pipe" defender. She put up a gallant fight; but the challenger, Dixie II, proved too fleet, and the cup was transferred from the Chippewa Bay Yacht Club to the Thousand Island Yacht Club, ten miles farther up the river. Chip III has since been converted into a pleasure boat, one of her powerful motors having been removed and her cockpit changed to suit her new requirements. The motors in Dixie, the defender, are the same as those in Dixie, the challenger, of a year ago; but her hull is new, having been changed before her trip across the Atlantic to participate in the Monte Carlo races of last winter.



THOUSAND ISLAND YACHT CLUB.



THE COURSE.

Under an act of Congress recently passed, the services of the officers and crew of the United States revenue cutter Morrill were obtained to aid the commitee in policing the course. Several of the speedy private motor boats of the vicinity were requisitioned, and each of these, manned by an officer and sailor from the cutter, was used as a patrol boat to keep the course free from all craft except the contestants. Some of these boats were anchored at points marking the ends of the boundary lines of the course, and the officer, with the aid of a large megaphone, warned intruders off of the reserved waterway. As all of these officers were empowered to arrest any wilful offenders and fine them $500, there was but little trouble encountered from any of the spectators' craft. During the second day a large steam yacht came slowly up the channel and crossed the upper end of the course just as Jan was finishing her second circuit, causing the racer to circle around a considerable distance out of her course.

As the course crossed the middle of the main American Channel at each end, it was to be expected that some of the large Lake freighters which navigate this section of the river as a part of their route would pass up and down during the races, and it was naturally out of the question to enforce the rules on these large commercial steamers. The only manner in which any of them interfered, however, was to delay the start of the last day's race for fifteen minutes while one of the largest freighters plowed majestically up the river.

Although the Gold Challenge Cup races this year may have seemed somewhat like a procession to the casual observer not interested in motor boating, they furnished to the lover of the sport an exemplification of everything that a well-conducted contest should be; and it is no exaggeration to say that their management, the performance of the boats and the formulation and enforcement of the various rules were well-nigh perfect. The shores lining the course were thronged with spectators not fortunate enough to be able to witness the race from motor boats, and the manner in which they stuck to their posts until after the last racer had crossed the line in each day's event was an indication of the intense interest taken in the contest, and proves the assertion that a race does not need to be close or the result in doubt in order to be interesting.

The course of the Thousand Island Yacht Club off Alexandria Bay is an ideal one for races of this character, and the Gold Challenge Cup races always attract the fastest boats in this country. Nowhere is the motor boat more a part of the life of the community than here, and nowhere are speed boats seen in greater numbers. Their usefulness in these waters is not confined to racing alone; but, in a locality where boats are the only means of communication, a high-speed craft with good carrying capacity is essential for daily use.

The summary of the three days' racing follows:

FIRST DAY, AUG. 19

START 3:30

BOAT.	First Round, Time.	Second Round, Time.	Third Round, Time.	Total Time.	Score.
Dixie II	3:51:16	4:12:43	4:33:56	1:03:56	4
Stranger	3:54:09	4:18:25	4:42:21	1:12:21	2
Duquesne	3:52:39	4:16:00	4:39:20	1:09:20	3
Jan	3:54:18	4:18:55	4:43:11	1:13:11	1

SECOND DAY, AUG. 20

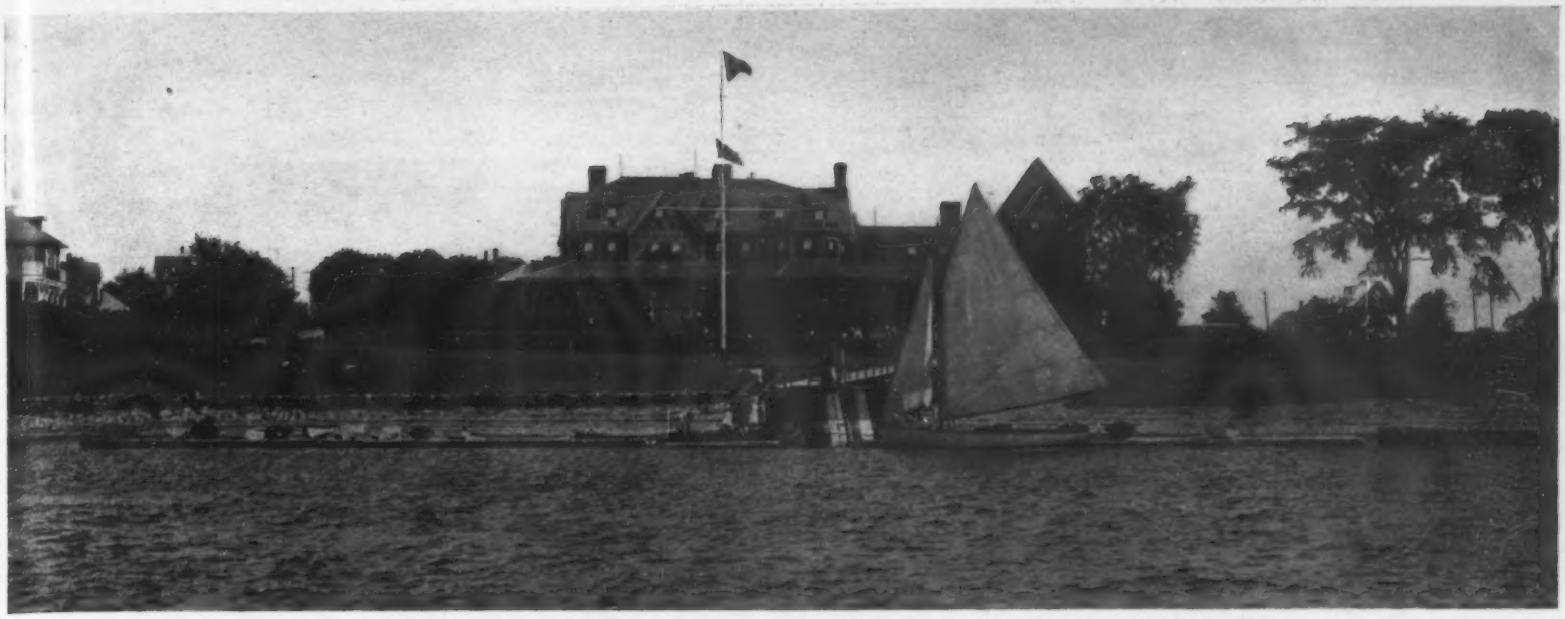
START 3:30

BOAT.	First Round, Time.	Second Round, Time.	Third Round, Time.	Total Time.	Score.
Dixie II	3:52:26	4:14:17	4:36:50	1:06:50	8
Stranger	3:54:07	4:18:20	4:42:28	1:12:28	4
Duquesne	3:52:01	4:14:53	4:37:55	1:07:55	6
Jan	3:54:40	4:19:16	4:43:26	1:13:26	2

THIRD DAY, AUG. 21

START 3:45

BOAT.	First Round, Time.	Second Round, Time.	Third Round, Time.	Total Time.	Score.
Dixie II	4:05:12	4:24:30	4:43:25	0:58:25	4
Stranger	4:08:12	4:31:50	4:55:05	1:10:05	2
Duquesne	4:07:30	4:30:44	4:54:44	1:09:44	3
Jan	4:08:53	4:33:26	4:57:40	1:12:40	1



HOME OF THE EASTERN YACHT CLUB, MARBLEHEAD, MASS.

The 1909 Cruise of the Eastern Yacht Club

By WILLIAM U. SWAN

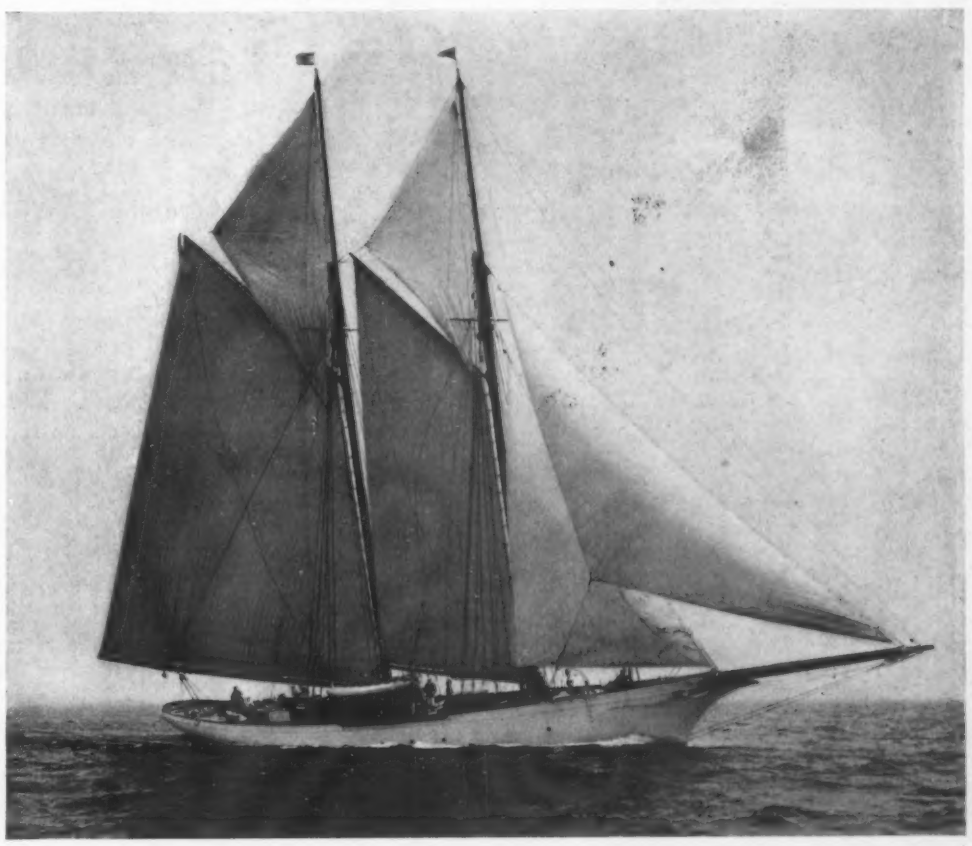
Photographs by W. B. Jackson and James Huntington

"When the curtain of the haze
Shuts upon our helpless ways."
—Kipling's "Wet Litany."

THE Eastern Yacht Club's annual visit to the picturesque little harbors of the Gulf of Maine last summer was more of a cruising cruise than the usual succession of race events, yet more yachts started from Marblehead two hours after sunrise on the morning of July 10, and a greater number held through to the squally finish at Bar Harbor on July 17, than the club's annals record for many a year. And what was more important, a couple of days of thick weather during the week instead of disrupting the fleet proved an actual blessing, as it threw the members and guests together as seldom before.

The big fog factory off Monhegan was especially active during the second week in July, and ground out some mist products that could easily have been cut up into great junks of pork. But the flag officers and a number of the more energetic members refused to allow the fog king to wetblanket the cruise; so all hands were sent ashore for ball games or mustered on the flagship for rowing races, and His Misty Majesty was easily defeated, with the result that when the windup dinner came at Bar Harbor the fleet sat down as one family and last names were forgotten.

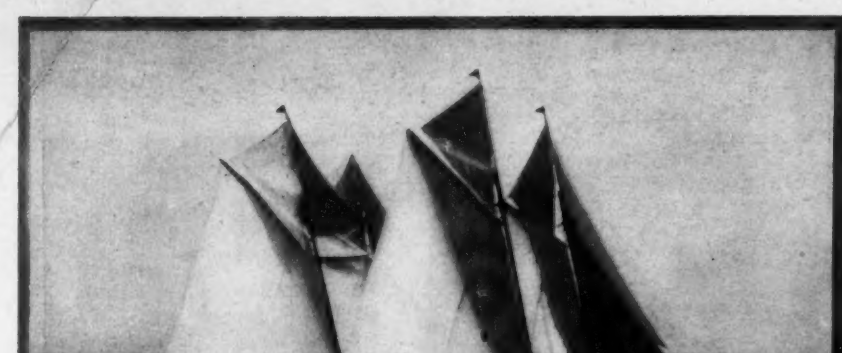
Yet the racing contingent had some fine sport, and the long scoot down the wind to Portland, in which the yachts were blown like froth on the wavetops by a 20-knot sou'-wester, enabled every boat to pay in full, in those few hours, all that had been lavished on hulls, spars and sails; and what few skippers lost canvas saw the smoke of the flying threads blow off ahead without regret.



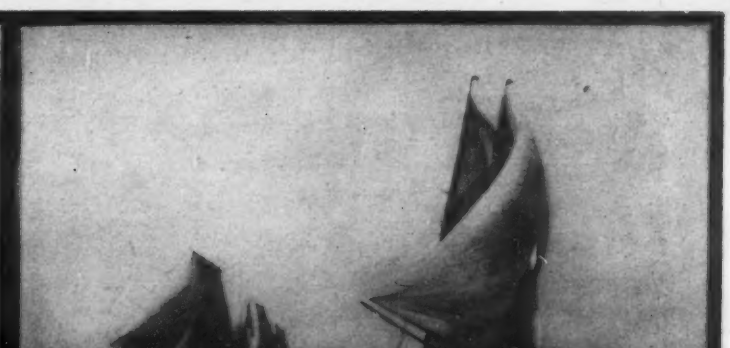
ARBELLA, COMMODORE W. B. THOMAS, FLAGSHIP OF THE EASTERN YACHT CLUB

The cruise also uncovered an able-looking little boat in Adventuress; but after taking the Puritan Cup in the annual regatta off Marblehead which always heralds the cruise, the latest Herreshoff addition to the M class had some hard luck, so that her true worth could not be measured.

The Eastern cruise this year began with a



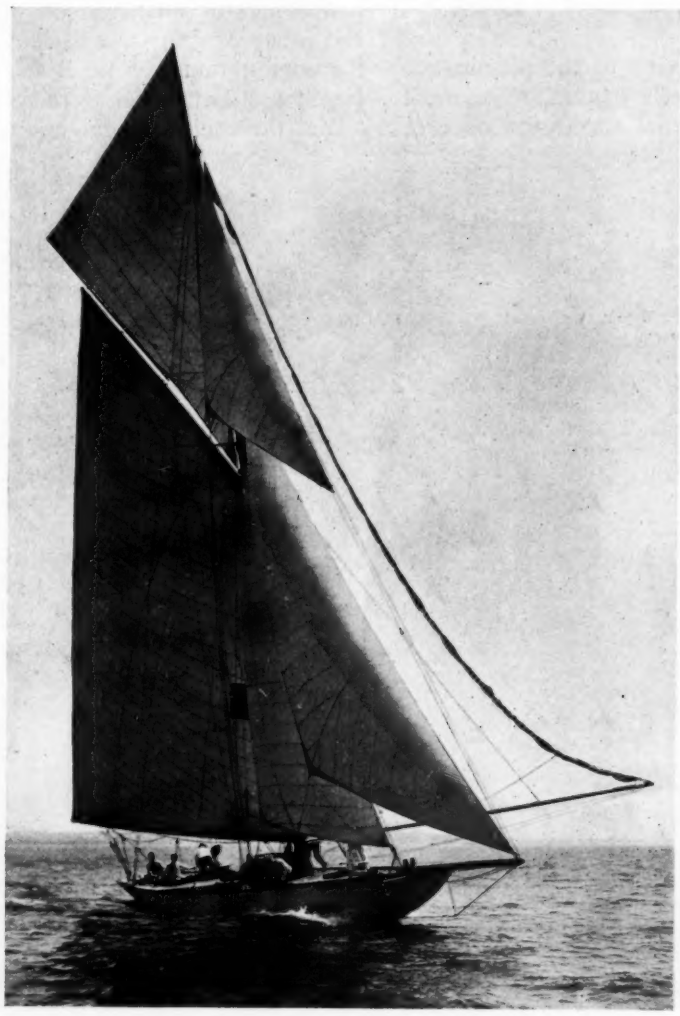
VENONA AND IROLITA STARTING FROM BOOTHBAY.



INTO PORTLAND BEFORE A 20-KNOT SOU'WESTER.

fine slide down the wind. There have been some grand long-distance yacht club runs in the last quarter of a century along the New England coast, and the old Burgess schooner Constellation and the 1893 cup defender Vigilant have been the leaders in nearly all of them. How Constellation did fly when she showed the way to the New York fleet around Cape Cod in 1891 and established the record of 9 hours and 50 minutes from East Chop to Marblehead Rock! Didn't Vigilant leg it in 1897 from the Vineyard to Mount Desert in that memorable run of the New York fleet when forty yachts ran 180 miles under spinnakers from Pollock Rip to Baker Island without touching a rope and Colonia beat Emerald by 21 seconds? And wasn't that a great trip around the old Cape in 1902 when the squalls came off the Highland so viciously that Yankee lost her topmast. Vigilant and Constellation again showed the way this year from Marblehead Rock to Cape Elizabeth Lightship, and in the last 30 miles both logged 13 knots.

The Eastern fleet always seeks to get as far down Maine as possible early in the cruise that the charming little harbors in Casco and Penobscot may be explored leisurely. Valuable inducements in the way of expensive trophies are offered for schooners and sloops for the initial run, and thirty-two yachts and twenty racers enjoyed the great breeze over the taffrails in that clear summer day. Naturally, in a before-the-wind affair the little yachts were left far astern; but the time-allowance table helped them out, and as each boat came bowling over the line with spinnaker-poles skipping the big seas or brushing the clouds above the main truck it was quickly figured that each had her fore-runners beaten. The little schooner Venona, the Bermuda winner of 1908, and the N sloop Heron brought up the rear and swept all before them.



ADVENTURESS PROVED AN ABLE LITTLE BOAT.

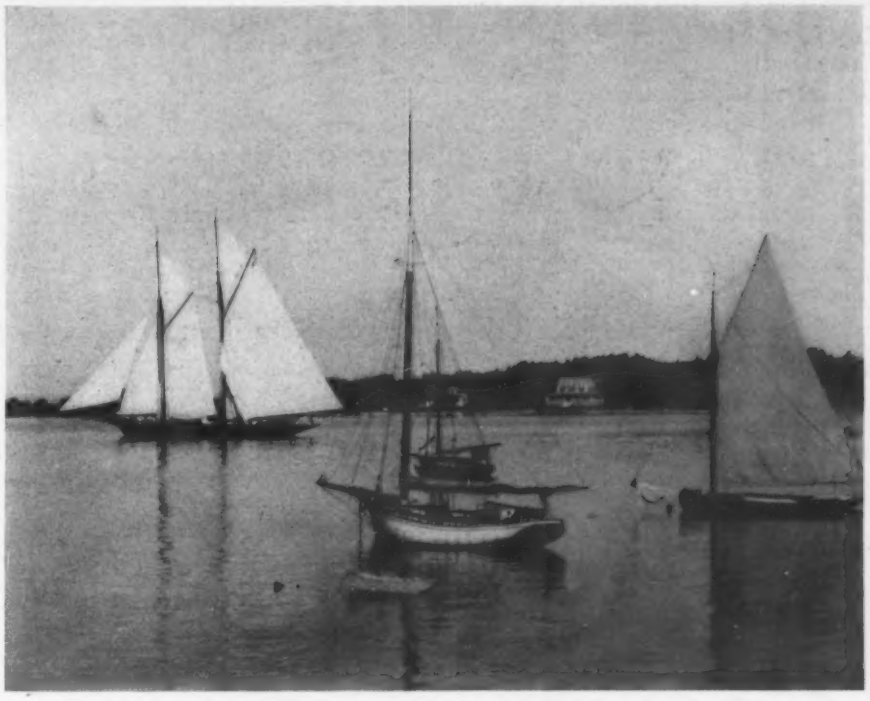
It is always a treat to see Captain "Nate" Watson jibe Constellation in a breeze of wind, with light sails coming in and breakers a couple of miles ahead. A quarter of a century on the big yacht has enabled the old Plymouth skipper to handle her as easily as he used to sail the old Huron; so when every sailing master off Cape Elizabeth this year was sliding up into the wind and coming around on the other tack the Constellation's main boom swung as easily across the taffrail as that of a North River packet. Steep downhill jobs have no terrors for Captain "Nate."

The following day, Sunday, brought rough seas and some fog outside, so most of the fleet sought the calmer waters and clearer conditions of Casco Bay as they jogged along down to New Meadows River, where far up its narrow reaches the yachts found an attractive nestling place in Winnegance Bay.

Here the fog stepped in from the sea and made a ball game in an uncut hay field not only possible but highly amusing, for the balls were soft affairs, and there was no fear of broken fingers. With a millionaire as captain of one nine and a successful merchant leading another, the fog was soon forgotten, while those on the bleachers had a chance to find out who were on the other boats. Several private matches between some of the flyers of the fleet was the outcome of this leg-stretching trip in the fragrant valley of New Meadows. Don't pass it by, Mr. Cruiser, as you explore the Maine coast, for besides its natural charm there is a chance ashore to break the gastronomic record now held by a Bowdoin undergraduate, who circumnavigated ten lobster chowders at one observation. Cundy's Harbor, half-way up from Cape Small Point, is a good place to make and mend sails, and it was there that the Gloriana patched

her spinnaker with the mate's big handkerchief.

When the Eastern cruise was laid out in the spring it was decided to pass Boothbay and to seek the historic attractions of ancient Pemaquid. But an enterprising hotel proprietor in the old fishing port confidently and assiduously advertised a rendezvous of the Eastern Yacht Club fleet off his Boothbay hostelry, and, being intimately acquainted with the fog manufacturer, had no difficulty in delivering "the goods" when the fleet was chased up into the harbor by the mists.



THROUGH FOX ISLAND THOROUGHFARE.

Many a time has Boothbay proved a welcome haven, and no one appreciates its safe harbor more than Col. William R. Nelson, of Kansas City, who annually puts aside journalism for the pleasures of the sea, and who took his first yachting on the ancient schooner Foam.

Bucking a stiff southeaster off Seguin, his skipper remarked to the genial Colonel that there was a fine harbor in Boothbay. "She seems to be going all right," remarked the Colonel, who had just recovered from his first seasickness and wanted a taste of salt water, "and I guess we had better keep on."

A second and third time the skipper came aft and held out Boothbay as a particularly quiet spot in which to lay, until the Colonel, becoming curious, asked what the matter was, anyway. "Well," said the skipper, as he dodged a big sea coming over the starboard rail and saw some of the deck winking at him, "this craft of yours wasn't built last year, and this is a darn poor place to throw a plank."

The Foam never went east of Boothbay, and Col. Nelson came home by land. Now the Colonel sits complacently on the deck of the big schooner Hoosier, which consorts half the season with perfect equality with the staunchest of the Gloucester fishermen.

A clear, cool westerly blew the fleet away from the spruces and mermaids of Squirrel Island and gave the yachts a pleasant run round the Heron Islands and Old Man's Ledge into the Penobscot, with a racing finish off two Bush Light and a harbor for the night in Kent's Cove. For several years the Eastern fleet has coquetted in Gilkey's Harbor and Dark Harbor, on either side of Islesboro; but this year it was decided to flirt a bit with North Haven. So when the yachts came marching down the Fox Island thoroughfare there fluttered ahead or scudded alongside flocks of noisy little launches laden to the gun'ales with girls, and more girls, and often The Girl herself, who blew the welcoming kiss with infinite grace from off the tips of her well-tanned fingers to the bronzed tar on the after deck of the yacht.

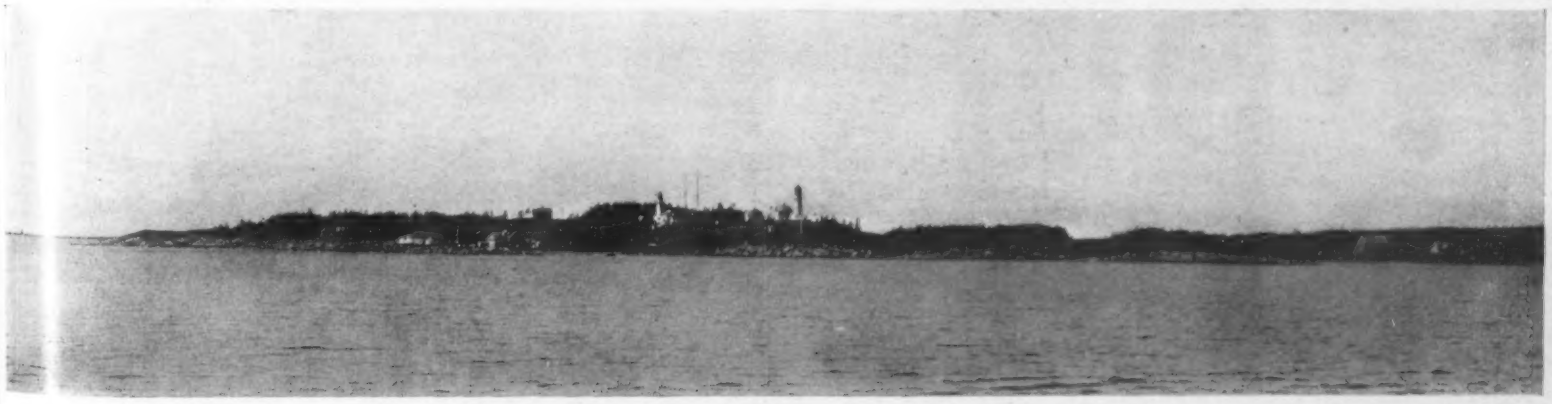
Leaving The Girl to gather more tan on her hands and more sea roses in her cheeks, the fleet kept on eastward the following day, still in goodly numbers, the racing contingent struggling in a light southerly air round Old Saddleback, and the cruisers threading the ledges and low islands of Deer Island thoroughfare and Jericho Bay until the little white lighthouse among the spruces far down on Swan's Island beckoned the yachts into Old Burnt "Cote" Harbor. It is a tradition which Vice-Commodore F. Lewis Clark, of Spokane, comes across the continent yearly to maintain that the Eastern fleet shall fare sumptuously on big sea scallops while in Burnt Coat. The bait has certainly served to catch most of the yachts every year, and twenty-six of them anchored in the little harbor that pleasant afternoon of mid-July, all hands eager for another taste of the succulent bivalve.

One year Commodore Clark's skipper, who usually acts as scallop purveyor to the fleet, announced a day or two before that the Swan's Island catch had failed.

"You will go ashore now," said the commodore, with as much sternness as his genial nature would admit, "and don't you step on this deck again until you have corralled enough scallops on the Maine coast to feed the fleet, and your financial limit is anywhere in three figures."

A few hours later the skipper clambered back over the side and fifty quarts of scallops were waiting for the fleet when it turned into Burnt Coat.

Scallop Cove is what Burnt Coat is called by the Eastern fleet; but Lobster Inlet is its right name, for its entire claim for existence in the absence of the summer visitor, who has not yet dis-



TWIN LIGHTS, CAPE ELIZABETH.

covered it, is the harvest on the kelp-covered ledges of Swan's Island and Isle Au Haut. Once a day the little steamer from Rockland breaks into the sleep of the few inhabitants; but she leaves so early in the morning to retrace her steps that everyone misses the thrill of her departure, which occurs at 5.30, Swan's Island time. Some day the lobstermen will discover that Eastern Standard time has obtained elsewhere since 1883; but just at present they are governing the hauling of their lobster pots by the time which Colonel James Swan, of Dorchester, gave them when he bought the island in 1783 for three shillings an acre.

Down in Swan's Island one of the smaller boats with rather an antiquated culinary gear came struggling into the harbor flying the signal E: F. "Am afloat," and when anxiously hailed by one of the larger boats who feared that she was sinking, her skipper replied, "Our grub is low, the ice is gone, the cooking stove is out of commission, and the only thing that works is the corkscrew." And the Corkscrew she was called to the end of the cruise, while her famished but hardly thirsty crew were rescued from starvation and regaled with a civilized dinner for the first time in a week. In fact, the custom of the larger yachts entertaining those from the small boats is one of the planks on which the success of an Eastern cruise rests.

Having caught the fleet snugly at anchor in a perfectly landlocked harbor, the fog-making industry resumed operations and proceeded to stopper the entrance hole. But again the yachtsmen refused to accept defeat or to have their spirits dampened, at least not by a little fog; so it was decided that this was the place and this the time for the dinghy and gig races. The obscured horizon made searching for the turning buoy a hunt-the-slipper game, while eagerness by a dozen boats to turn the flag at the same time brought on several amusing mix-ups, in which oars were used to repel boarders instead of propelling boats.

The final run around Great Duck Island into Bar Harbor began piano and ended fortissimo, with black squalls singing out of the Green Mountain calliope across Frenchman's Bay. Yachts that left Swan's Island in the softest conditions came staggering round Schooner Head under three lower sails and a jib shaking. The cruise ended as it began, in a breeze of wind.

Presentation dinners at the Reading Room at Bar Harbor—the club's station in the East—have always been a delightful feature of an Eastern cruise. About everyone contributes—the flag officer's donations of silver to the winning yachts, the Fleet Captain's prizes to the successful oarsmen, and the songs, speeches and poems of the talented members are distributed with lavish hand, while Dr. Robert Amory, the club's sprightly representative at Bar Harbor, sits back with the consolation of having provided all things well.

Before the quiet, unassuming Commodore rests the silverware. There are usually four prizes, two for sloops and schooners making the best corrected time in the longest run of the cruise, and two more for the sloops and schooners making the best total corrected time in all the runs of the cruise.

Captain T. H. Shepard, of Heron, and Captain E. J. Bliss, of Venona, received the long-run prizes, as has been said. The vice-commodore's cup for sloops went to Captain S. Reed Anthony of the 50-footer Doris, a most popular victory, as the white sloop has been struggling without much success for three previous years.

For the third successive year Captain William S. Eaton, of the schooner Taormina, stepped forward and received the principal schooner prize. One year there was a fifth prize on the Commodore's table, an unusually artistic and valuable piece of old English silver. On a previous cruise a sympathetic guest on one of the yachts saw one of the smallest craft of the fleet come struggling in day after day long after the rest of the boats were safely at anchor. Feeling that such tenacity of purpose, although hopelessly behind any prize winning, should be rewarded, he decided to send the club next year a Tailender Cup; and it is safe to say that, had the Eastern yachtsmen been aware of the intrinsic worth and beauty of the trophy, drag anchors would have been thrown out on every run. But Eastern yachtsmen need no silver incentive for racing. All seem imbued with a sense of fair sportsmanship, which places the exhilaration of sailing a good race as the greatest prize to be gained. Certain rules must always govern contests, but quibbling over technicalities has no place in the club annals.

The Lipton Cup Races on Lake Michigan

By J. M. HANDLEY

Photographs by R. H. Hall

I. A. C., THE RUNNER-UP IN THE SERIES.

FRED A. PRICE'S crack 21-footer Spray, which has won more trophies than any other boat of her class that ever raced on the Great Lakes, has finally added the Lipton Cup to her many other laurels, and scored the second victory in this event for the Chicago Yacht Club, which has held the trophy since last year by virtue of the victory of Chicago.

The races for the Lipton Cup have always been spectacular. They generally develop features that are unusual, exciting and interesting, and the series of three races sailed this year did not make any exception to the rule. Luck is always a factor in yacht racing. It certainly trailed in the wake of Spray this year, although in saying that luck was a potent factor there is no intention to slight the splendid little boat, her skipper or her crew. Fred Price has been a consistent and enthusiastic supporter of the game in these waters. He has been a persistent trophy hunter, he has spent his time and his money to win, and if luck favored him this season it is the luck that should reward the persistent fighter, a good, game man, who does not allow defeat to discourage him.

Battling to the last moment for the big Lipton trophy was George R. Peare, whose name is writ large in the annals of the challenge cup history. The race between Price's Spray and Peare's I. A. C. throughout the series of three contests was the closest that has yet marked the event, and comparable only to the famous series of 1907, when Cherry Circle made such brilliant yachting history in this competition. The first race, sailed Saturday, August 14, went to Spray through luck, although there

are not a few that give Price credit for using better judgment and displaying keener seamanship and knowledge of wind conditions. Be that as it may, a sudden shift of wind, unexpected by Peare, turned I. A. C.'s lead to naught and gave Spray an advantage of position on the last leg of the race that gave the famous ex-Detroit boat the first victory. The second race, sailed Monday, August 16, went to I. A. C.; and here Price declared that his luck deserted him, because he lost the windward mark in the haze and sailed nearly half a mile out of his course before locating it. However that may be, he hauled up on the entire fleet, after rounding the first buoy last by several minutes, and overhauled every boat in the bunch but I. A. C., which maintained her lead to the finish line. The last race was the real struggle, and as both Spray and I. A. C. led all their rivals in points by such a margin that the race lay between the two, they paid little or no attention to the rest of the starters and fought it out by themselves. It was nip and tuck from start to finish, with the boats so close together that at one time they were close enough to enable Peare to hang a protest on an alleged foul. After a thorough hearing, the foul was not allowed, and Spray won the cup, beating I. A. C. out in a ding-dong finish by a bare margin of 10 seconds. The race itself went to La Rita II, which sailed under the Illinois Athletic Club colors, as did I. A. C., and gave the Illinois Athletics credit for second and third place in the race.

SPRAY, WINNER OF LIPTON CUP FOR 1909.

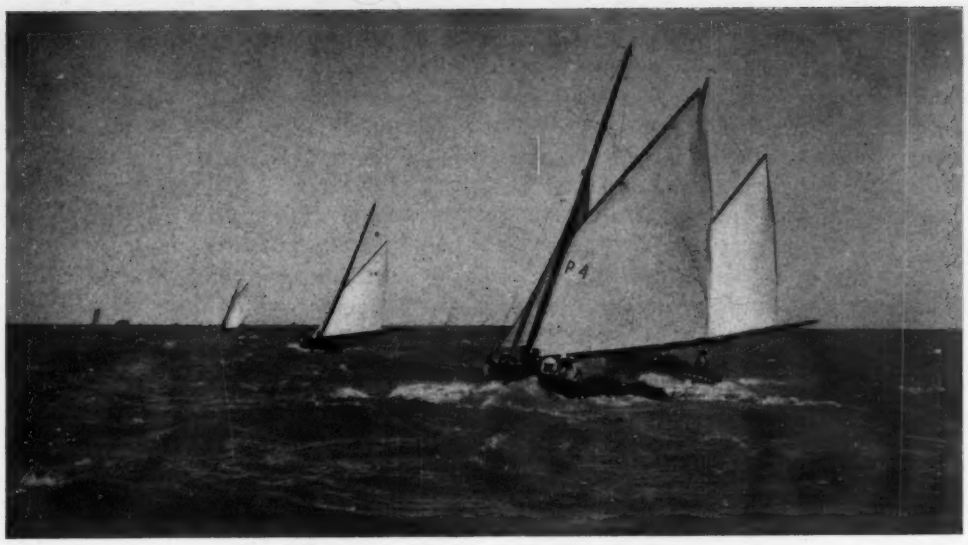
Spray has been the champion 21-footer of the Great Lakes for several years. Around Detroit, when owned in that city, she was unbeatable, although she never succeeded in graving her name on the big Columbia Yacht Club trophy until this year. The Lipton Cup races have heretofore resulted in rather a peculiar series of two wins for each club. For two years La Rita won the cup for the Columbia Yacht Club. Then Ste. Claire carried it off for two years to Detroit. The Chicago Athletic Club annexed it for two years with Cherry Circle, and now the Chicago Yacht Club has won it twice with Chicago and Spray. William Hale Thompson and George Peare declare the sequence of twos will be carried further, and that for the next two years it will be won by the Illinois Athletic Club. They are planning already for a world-beater that will give the new club a chance to display the big cup in its trophy room.

From the builder's standpoint the races this season failed to have any particular interest, as no new boats were turned out for the event. The lack of new boats did not rob the race of interest, however, as it was known that both I. A. C. and Spray had been practically rebuilt during the winter and greatly improved. La Rita II, which had given Chicago such a close race for the trophy last year, was also put in shape and vastly improved, while Cherry Circle, Jackson Park and Columbia completed a sextette of unusually powerful boats. That none of the lower lakes boats in the class would start had been anticipated. The local authorities have, unfortunately, irritated the lower lakes sailors by the conduct of their contests, and it was foregone that none would make the long trip to Chicago, especially as no new boats had been built, and none of the old ones warranted the belief that they were fast enough to have more than a chance. The local rivalry was keen, however, and between the Chicago Athletic Association, the Illinois Athletic Club and Columbia, Chicago and Jackson Park Yacht Clubs the keenest interest was manifested in the battle.

The first race was sailed in a spanking breeze that soon became shifty and fluky and finally took a hand in the proceedings by handing Fred Price a victory. When the starting gun belched the boats were in close formation right on the line, and Price shoved Spray over almost in the smoke of the gun, with I. A. C. right on top and La Rita II, Jackson Park and Columbia so close together that the skippers exchanged repartee as they settled down for the first leg—a beat to windward. The course was a triangle of two miles to the side, to be sailed twice. The heavy chop of sea running seemed to bother Spray, and Peare managed to work I. A. C. out from under his rival's lee. Price saw himself headed, and split tacks with the man he most feared in the race; but Peare followed suit, and they alternated, Price going about as Peare reached him, and the latter following him up and gaining. The heavy sea suited I. A. C. as she got down to her sailing lines, and Peare gained substantially, rounding the weather mark 35 seconds to the good. The others followed in this order: Jackson Park, La Rita, Columbia and Cherry Circle, the latter being delayed at the start by splitting her throat halyard block just after going across the line.

The second leg was a broad reach, and I. A. C. broke out a big balloon jib, and followed soon after by setting a small spinnaker, carried well forward; but it did not seem to help materially, and Spray held her safely all the way. The third leg was also a broad reach, and Peare again tried to carry a small spinnaker. Price was satisfied with his biggest balloon jib, and gained rapidly on I. A. C. A following breeze that shifted slightly enabled Spray to set a spinnaker later in the run, and she soon overhauled I. A. C. and passed her turning the home buoy. Jackson Park, La Rita and Columbia turned in the order named, with Cherry Circle so far astern that the timers on the judges' boat had to give up taking her time. The wind had freshened considerably during the run, and when Spray started to beat to windward the sea bothered her badly. Peare settled down in grim earnest and gradually cut down the lead of his rival, then passed him and ran away, going around the mark with a lead of over a minute. Columbia stood inshore and got a better shift of wind that put her ahead of La Rita and Jackson Park, which were indulging in a little duel of their own. Rounding the buoy, I. A. C. looked all over a winner; but Price kept at it, although I. A. C., with a fresher breeze, managed to gain a few more seconds on him. Turning for home, Peare again set his balloon and hoisted a small spinnaker high up way forward. It is a sail that has helped Peare win many races in the past—a sort of fad of his—but this time it cost him the race. In order to hold the wind, he dropped to leeward of his course and below his mark, and the

sail lugged him off a bit more. Price, coming down to the finishing line with just a big ballooner, was gaining all the way, and when a sudden shift of wind, that had been foretold by the movement of the clouds and the drift of smoke inshore, hauled around from the southeast to the southwest, Price found himself reaching, close-hauled, for the finish, while Peare, off to leeward, had to beat to the finishing line. Spray slipped over, amid the greatest excitement, a winner by over one minute. Indeed, such a time did Peare have getting back to the line that he was almost nipped by Columbia.



THE SECOND RACE WAS STARTED IN A HEAVY BLOW.

The Sunday that intervened between the first and second races was a busy "chinning" day around the yacht clubs, and the yachtsmen put in the day tuning up for the renewal of the fray. Monday dawned clear and bright, with a cracking breeze from the northeast piling up the seas over the breakwater. Later in the day the skies clouded up and a bit of haze settled over the lake. The wind kept fresh all day, however, and when the boats slipped their moorings there was a rollicking blow, and predictions ran freely that Columbia and Jackson Park, the heavy-weather boats, would bear watching. The course was a beat to windward of three miles and return, the course to be sailed over twice. Double reefs was the order of the day, and they all jockeyed into position with short sail. In the preliminary work a heavy sea smashed Columbia's rudder and put her out of the race. The judges decided it would be impossible to hold the race for her to make repairs, and reluctantly sent the other five away. At the start Jackson Park went over the line first, and was followed by Spray, I. A. C., La Rita II and Cherry Circle in the order named. The heavy sea seemed to bother Spray badly, and she resorted to splitting tacks and ran into a heavier haze, while the others fought it out with shorter tacks, I. A. C. doing grand work and making the buoy first by a margin of nearly four minutes. La Rita was second and Cherry Circle third, while Jackson Park turned fourth and Spray last. Price announced afterwards that he had lost the buoy in the haze, which accounted for his poor showing on the first leg. On the spinnaker run Spray had trouble breaking out her big running sail and had to send a man aloft, but when it was once set the speedy little boat ate up the distance between her bows and the rest of the fleet and gained rapidly. Here Jackson Park, the other heavy-weather boat, had her troubles. The after spinnaker guy carried away in the thrash of the sea and the big boom lashed the decks, hitting Arthur Amundsen, a member of the crew, and injuring him seriously, while "Art" Williamson, who was trying to hold down the boom by sitting on it, had a narrow escape from going overboard. The mishap killed Jackson Park's chances, and she fell back to last place. The beat to windward on the second round gave Price a chance to work up into a good position, and when I. A. C. rounded the outer mark Spray was her nearest rival, going around 7 minutes behind. La Rita II had some of the bad luck, parting her peak halyards, and she dropped back while a new one was rove.

The spinnaker run to the finish line saw Peare gaining a little, and he rounded first, with Spray second, La Rita third, Cherry Circle fourth and Jackson Park bringing up the rear.

The last race day offered favorable conditions for a good race, sailed over a quadrilateral course of three miles to the leg. A light northeasterly breeze, that freshened to a velocity of about 10 miles an hour, blew steadily, and although a long, rolling sea remained from the heavy blow of the preceding day, it did not bother those boats that liked smooth water, as did the heavy seas of the second day. The race was admittedly between Spray and I. A. C. Each had a first and second to her credit, and as the races are sailed on the percentage basis, it was easily seen that no other boat had a chance to take the trophy from either of these. Price and Peare realized this, and a duel between the two was the result—a duel of wits and seamanship, of man and man, of boat and boat. The thrill of the race was in the air, and from every boat in the big fleet that followed the racers vibrated that air of expectancy that denotes nerve-testing efforts.

The first leg of the square as laid out was a beat to windward, and with every inch of canvas set the boats came up to the line in a bunch and went over as one boat in the puff of the gun. Cherry Circle was first to put her nose over, and Columbia, La Rita, Jackson Park, Spray and I. A. C. followed so closely that

(Continued on page 330.)

SPRAY NOSING OUT I. A. C. AT THE FINISH OF LAST RACE.

Some Freaks of Sound in Fog

By W. E. PARTRIDGE

FOG is one of the terrors of the sea which science, with all its resources, has not been able to remove and, it would seem, has not even mitigated to any considerable extent. We exchange signals from ship to ship more freely than formerly, even telling the direction in which we are steaming or sailing. But this is of small value unless we have some means for locating the direction from which signals are being sent.

The difficulty which ships have in finding each other in a fog was well illustrated when the Florida sank the Republic not so very long ago. A sister-ship was hours searching in vain for the sinking vessel, all the while in perfect communication with her, and with vessels about her, by means of wireless telegraph apparatus. Fog not only hides objects, but often confuses the ear completely. It is for this reason that it becomes such a menace to navigation. Perhaps it would be more accurate to say that, when the fog takes away our power of seeing, the natural confusion of sound by the atmosphere renders us blind indeed.

Fog-horns, sirens, bells and guns have for years been used to locate other vessels and dangers to navigation; but they have always been more or less unsatisfactory. There seemed to be an uncertainty about them, and in this country the steam siren—perhaps the most powerful sound-producer yet made—was invented and applied to fog signaling for the purpose of getting greater range and certainty. The Lighthouse Board of this country made many experiments about the time they adopted it. When, in after years, the English government proposed to establish bells, guns, etc., at lighthouses, to be used in fogs, they also made experiments.

On the English coasts endless complaints had been made that signals could not be heard, that they stopped sounding in fogs, and that they were altogether useless. To settle these questions and find out something about the behavior of sound in fog, experiments were undertaken by the Elder Brethren of Trinity House, who correspond to our Lighthouse Board. Whistles, sirens, guns, bells, etc., were set up on a headland on the English coast, and many really accurate experiments were made by keeping the signals constantly sounding and having a steamer carry the observers away from the sound.

As the first experiments were made in clear weather, distances were easily obtained by observing objects on shore with a sextant. The American sirens, in clear weather and under favorable circumstances, could be heard from 20 to 23 miles—much further than the bells or guns. But the atmosphere, even when clear, presented strange freaks in the behavior of sound. Sounds were obscured in most startling ways. Sometimes a mile away sirens, guns and whistles could not be heard, yet visual signals and escaping steam showed them in full operation. Steaming straight away for several miles, the sounds would be picked up again, then perhaps lost further away, and again picked up 10 or 15 miles from the point where the signals were made.

After hundreds of experiments, made in all sorts of weather, the conclusion was reached that there were "clouds" in the air which would not transmit sound. These "clouds" would account for the statements made by fishermen that the fog-horns did not sound at proper times, or stopped long before the fog had cleared.

The discovery was made that the freaks of sound were just as numerous in clear weather as in a fog. This had been known in a way, but little attention was or has been paid to it. An oncoming steamer makes a signal to pass. The puff of steam is seen, but not a sound reaches the other pilot's ear; and the matter is dropped with the comment that the wind has blown the sound away. It was found, however, that the wind has not as much to do with the movement of sound as we would suppose. Other conditions seem to have more influence upon it.

Tyndale, who made the greatest number of the English experiments, found that on some days no sound could be heard of whistles, sirens or guns loaded with 3-pound charges more than 4 miles. Yet, later in the day, the sounds could be heard 19 miles. Calculations showed that the variation in the power of the sound was as 1 to 50. In the early part of one day a deep tone of a whistle was heard much further than the high note of the same whistle. In the afternoon the high note was heard much further than the low note. On some days the gun with the 3-pound charge could be heard but 3 miles, and on other days the sound was heard distinctly 13 miles.

It was often found that when the vessel with the observers moved directly away from the headland on which the signals were located the sounds gradually grew weaker, and died away entirely at 3 or 4 miles, for a mile or two could not be heard, and then further away would be picked up again and heard distinctly. Often they were heard more distinctly at 7 or 8 miles than at 1 or 2. These silent places in the air, or "opaque clouds," as they were termed, seemed to have peculiar properties. They were found at all distances. Sounds seemed at times to jump over them. Men in boats a mile away from the signal station were frequently unable to hear a sound, while others two or three miles distant heard the sounds distinctly. This was a proof of "silent" places in the air over which the sounds were deflected.

Another feature was found even more startling in the action of sounds in the peculiarity of the echoes. A sail or a vessel's hull was observed to produce quite clear and noticeable echoes. The surprise came when they obtained sharp and clear echoes from empty space, or what was apparently a clear, unobstructed atmosphere. So we have clouds which return sound like a solid bluff or the sail of a ship. The power with which the sound was returned was often startling.

Further investigations developed many strange things in regard to the action of sound in clear weather and the effect of changes of temperature. It only remained to prove that sound was as erratic in fog as in clear weather. This was easily done. It was shown that under some conditions sound behaved very properly in the most dense fog. At other times it was quite as freakish as in clear weather. What with "opaque" clouds and those that produce echoes, we are able to account for all the freaks which are a matter of so much anxiety to the man afloat. A vessel may be only a mile away and sounding her whistle at regular intervals, and may not be heard at all. It is also possible that the sound may reach the ear of the listener from the southeast while the vessel itself may be to the northwest. Such things are very confusing to the navigator.

When a fog shuts in thick the air, as a medium for conveying sound, is utterly unreliable as a guide to distance or direction, no matter whether the source of the sound be a tin horn or a steam siren of the most up-to-date type. The submarine bells are said to give more accurate results, direction being quite easily ascertained. Sounds under water are not reflected by currents nor by the shore line, nor are they affected by the wind. The underwater system of transmitting sound signals has not been in use for a sufficient time to make all these points certain, however.

Up to the present time fog appears to be the one unconquered ocean terror. Even when equipped with wireless apparatus, and able to communicate with vessels about him, the mariner is helpless, utterly unable to locate himself or the vessels with which he is in conversation.

The New York Yacht Club's Cruise to Maine

By LAWRENCE PERRY

Photographs by James Burton and Mrs. Oswald G. Villard

JUSTICE, not to say a sense of proportion, dictates that a discriminating chronicle of the annual New York Yacht Club cruise begin at Portland. For it was on the run to this port that the club emerged from out of the riot of wind and wave a "fair weather" organization no longer, but an aggregation of game, sportsmanlike, hard-sailing shellbacks, who had lived up to the most exalted traditions of a past which many had thought would never be revived.

ARTHUR CURTISS JAMES, COMMODORE OF THE N. Y. Y. C.

Fair was the weather when the New York Yacht Club squadron put out from Vineyard Haven and faced the long road to Maine, and fair was the wind, fourteen knots and abeam. Ballooners were flung to the favoring breeze, guests aboard steam yachts settled themselves in their wicker chairs, and thus the stately argosy paraded past the yellow bluffs of the East Chop and went to sea. Less than ten hours later that fleet was fighting for its life; scattered over the viewless face of the waters, clean-lined sloops, which in the morning had caught and reflected the sunlight on spotless sail and hull, were flying for shelter—some with broken mast or spars, or torn canvas or parted rigging and gear, one, at least, helpless, dismasted, laboring in the sea trough dependent upon the mercy of the kindly skipper of the steamship Massachusetts, who saw the distress of the little pleasure craft and, unlike several other steamship captains who had passed close by the sloop and paid no attention to her, put a line aboard and took her in tow.

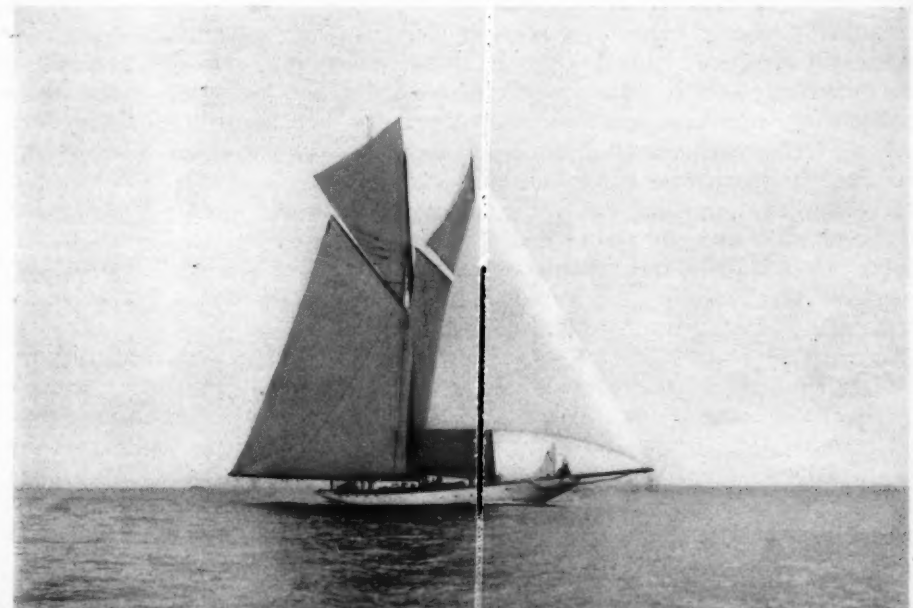
And so, of the fleet which had sailed so picturesquely from Vineyard Haven on Tuesday, August 10, the morning of August 11 found the constituent sailing craft thereof disposed as follows: Elmina, Aurora, Sea Fox, Taormina, Vigilant, at Portland; Corona, Idler, Visitor II, Lasca, at Boston; Polaris, Cleona and Queen at Marblehead; Ariadne, Pellegrina, Monamia and Irolita at Gloucester; Dervish, Eleanora, Savarona, Alcyone, Windward, Ariel and Adventuress at Provincetown; Miladi at Nantucket; Weetamoe at Vineyard Haven; Muriel at Tarpaulin Cove, with other windjammers of the fleet scattered along the coast of Maine and Massachusetts. Even steam yachts, a majority of those on the cruise in fact, were missing from Portland harbor on Wednesday morning. The scene, accordingly, was far from what the eager and enthusiastic citizens of the Maine metropolis who abandoned all pursuits and journeyed down to the water front to witness the unusual nautical spectacle had been led to expect. There were perhaps half a dozen steam yachts flying the New York Yacht Club burgee, one auxiliary and two sailing yachts—not much of a demonstration as demonstrations of this club go, and decidedly a disappointing one to those local scribes who, with note books in hand and dictionaries in their pockets, had journeyed to the harbor prepared to exhaust their stock of adjectives and metaphor in way of doing adequate justice to the visiting fleet.

But those who were near Commodore James and his energetic fleet captain, Franklin A. Plummer, that morning had deeper, more significant matter over which to enthuse than a marine display, which more often than not is an on-the-surface affair, figuratively as well as literally. Those who were with these two officers had, through the medium of telegraphic data, access to things which lay back of this apparent overnight disintegration of a powerful squadron. There was George Scott, of the schooner Miladi, lashed into Nantucket by a gale which would dampen the cruising ardor of many men younger than Mr. Scott.

"Wire when you leave for Bar Harbor. Will join you," telegraphed the undaunted "Scotty."

Then there was Louis F. Alberger, of the yawl Polaris, at Marblehead. His vessel had lost her bowsprit, he wired, but repairs would be made at once and the yawl would be on hand at the first possible moment. She was. She arrived at Portland in time to start for Rockland on Friday morning. And so it went, or rather, so it came—dispatch after dispatch from storm-beaten but not whipped yachtsmen, who, although manifestly sailing for pleasure, were willing to take their knocks when Old Ocean delivered them and to come back for more. Thus, while outwardly the fleet was insignificant enough, assurances that this would not be the case at Bar Harbor flowed in over the wires hour by hour.

Now, all this meant something. It marked, first of all, the development of a new spirit in the New York Yacht Club—a spirit which Commodore James, his fleet captain, Frank Plummer, and the regatta committee, Messrs. H. deB. Parsons, Ernest E. Loril-



ELMINA, ONE OF THE BEST-SAILED SCHOONERS OF THE YEAR.

lard and W. C. Kerr, have worked unceasingly to inculcate from the first day they assumed their duties, which are no less arduous than honorable. Then, too, there was brave work that tumultuous night and skill exhibited on some of the boats that placed a star above the might of the elements; experiences survived and disheartening situations faced and conquered—one of the grandest, if most riotous, nights the New York Yacht Club ever spent.

This is not fulsome phraseology. Take the night from any angle you wish; from that of the wallowing, helpless little sloop Eleanora, with Butler Whiting dangling himself from the bow, drawing from the wild sea with his feet the hawser which the steamship Massachusetts had cast into the water as a towline, to W. B. Duncan, Jr., sitting serene at the wheel of Aurora, sailing a true course, with nothing but the stars to guide him—the wind having snuffed out the binnacle and all other lights—conducting his charge over and through the rending waters and landing her in Portland second only to the superb 90-foot schooner Elmina, which had negotiated the turbulent course of 154 miles in less than 24 hours: take it from any of these viewpoints and you find material which justifies enthusiasm and warrants praise.

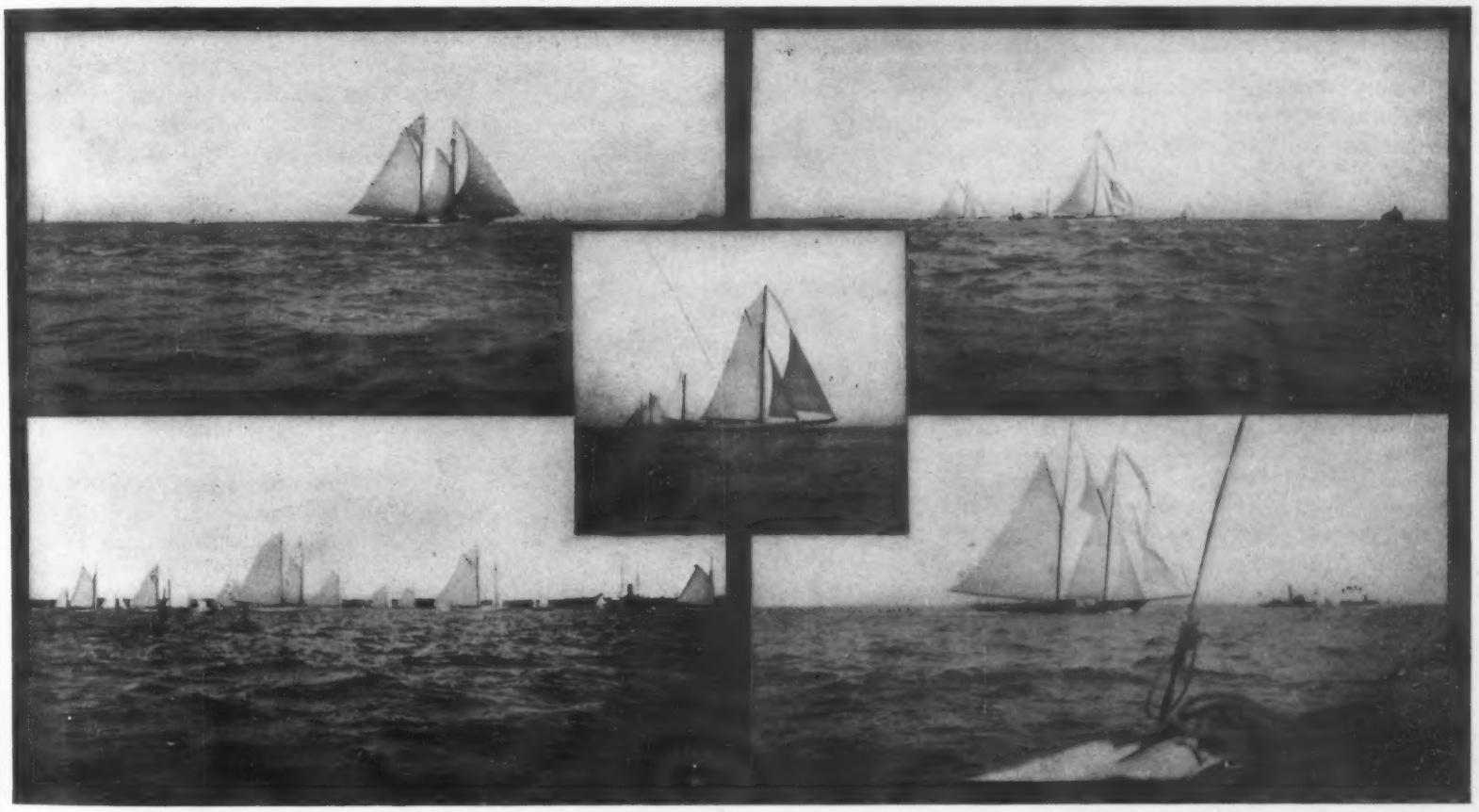
Eleanora! She was only thirty-six feet on the waterline and seemed so much smaller by comparison with the great schooners and the tall 64-foot sloops. Nevertheless, all through the day she made fine progress, and when night came was well ahead of Adventuress, against which she was racing. At eight o'clock, with a fine wind blowing and the Highland shining steadily out to sea, the sloop was on the port tack, heading eastward. In addition to Lawrence Darr, Butler Whiting, John R. Johnson and Charles Chapman, there were two professional sailors and a steward on board. By 8:30 o'clock the starlit eastern horizon began to disappear under uprising banks of dark, ominous clouds, and the moan of a rising gale sent coasting vessels scurrying for haven. But Eleanora had a race to win, and so on she went.

The seas began to lash angrily, not the long, deep sea roll, but short, choppy waves such as you see in a Lake Michigan storm, and the wind breezed on. Suddenly, without the slightest warning, the mast broke a bit more than six feet above the vessel's deck. The bowsprit snapped off close to the bow and the whole mess, rigging, spars and sails, fell over on the starboard side. This gave the craft a big list and the free running waves swept the deck constantly. With the wreckage cleared and a part of the boom dragging astern, she wallowed through the night at the mercy of wind and wave, both of which increased in fury as the hours wore on. Those aboard had but to cling to the deck, burn the New York Yacht Club's night signal of distress and wait for succor. It was not until four o'clock in the morning that a vessel tried to go to their assistance, although several steamships had passed by, and this craft was the schooner Muriel. She put about, but the wind prevented her from getting near to the distressed sloop. She finally went on. It is impossible where so many other events claim consideration to dwell at length upon what followed. Suffice to say that at five o'clock in the morning the steamship Massachusetts came up, threw a hawser overboard, which young Whiting recovered, and proceeded to tow the bow at five knots speed into Provincetown. Here the steamship was relieved by the press tug Eugene Moran.

"I'll communicate with you later, captain," called Darr to the master of the steamship.

"Don't bother," smiled the skipper, "you're a New York Yacht Club boat; glad to have been of assistance." Which was pretty white of the captain of the good ship Massachusetts.

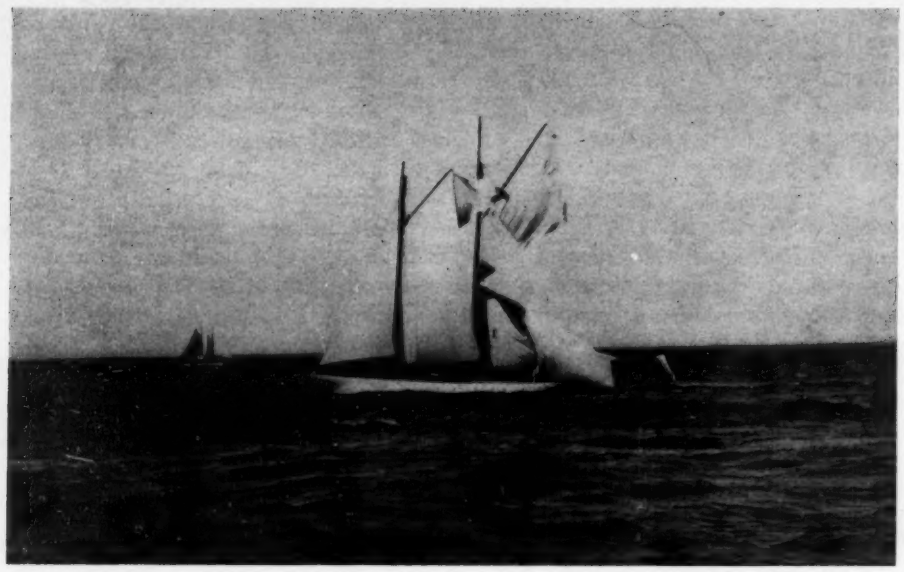
Weetamoe, Charles Lane Poor's Class J sloop, fought through the storm as any boat produced by William Gardner may be relied upon to fight. But in the heart of the gale a wave slashed across the deck, seized one of the crew and carried him out into the dark, whence he never returned. Olsen was a good sailor; he



EVEN THE AUXILIARIES CARRIED RACING CANVAS ON THE CRUISE.
GETTING READY FOR THE START, VINEYARD HAVEN HARBOR.

THE FAMOUS OLD VIGILANT.

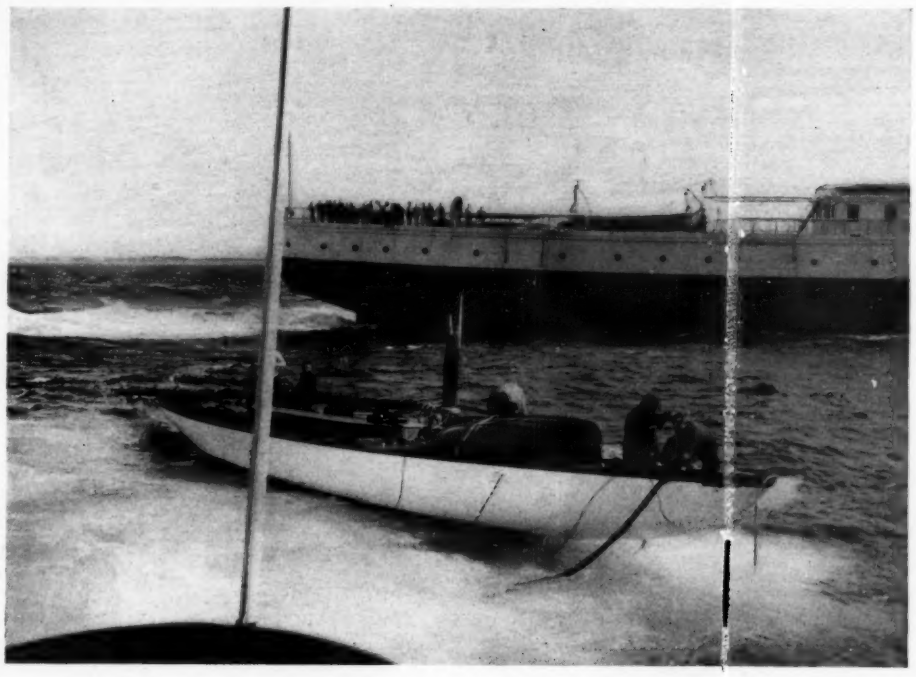
THE START FROM VINEYARD HAVEN ON THE MEMORABLE RUN TO PORTLAND.
DALLAS B. PRATT'S SCHOONER SEA FOX.



CORONA, AFTER RUNNING INTO POLLOCK RIP LIGHTSHIP.

had been with Weetamoe five years, and Professor Poor had not the heart to continue the cruise in the face of this tragedy. It was the first time in a great many years that a man had been lost from a New York Yacht Club boat.

In the face of conditions which raged upon the Atlantic that Tuesday night, conditions so venomous, so to speak, that owners of big auxiliaries, to say nothing of steam yachts, did not hesitate to put into the nearest havens, those of the sailing fleet which made destination under canvas were at once placed upon a roll of honor. There were five of these: Elmina, owned by F. F. Brewster; Aurora, Cornelius Vanderbilt; Taormina, W. B. Eaton; Sea Fox, Dallas B. Pratt, and Vigilant, W. E. Iselin. Those who saw Elmina when she breezed into Portland harbor, the first windjammer of the fleet which left Vineyard Haven the previous morning to arrive, will never forget her. She was no longer a pleasure yacht, in appearance at least; she had been tried by the winds and by the waves and out of the test she had come with every spar intact, with not even a ripped sail. Her decks were littered with gear and other mess accumulated throughout a night of windward work. Her canvas was wet, heavy and distorted and her rigging coated with brine. On the deck stood her crew in oilskins, as sturdy a crew as ever drank salt spray, their matted hair straggling from under the brims of their sou'westers. They were real shellbacks, these fellows. They had just "eaten this storm"—it was nuts for them—and they just stormed along on that staunch fore-and-after, dousing canvas when the wind hit up forty miles, breaking it out when it diminished,

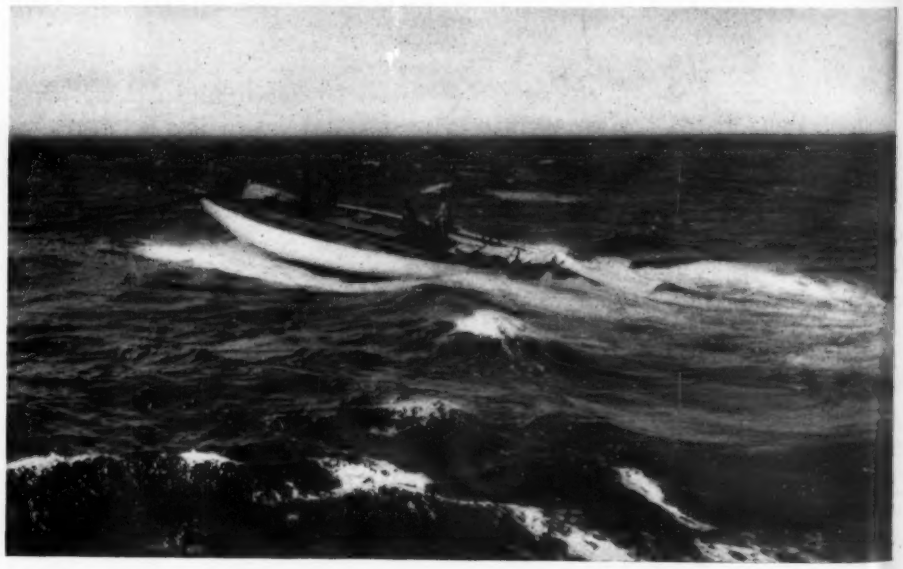


ELEANORA BEING TAKEN IN TOW BY THE PRESS TUG, AFTER HAVING BEEN PICKED UP BY THE S. S. MASSACHUSETTS.

working here and there cheerfully, with the deck canted to a thirty-five-degree angle, and Captain Dennis, lashed to the wheel, standing up to his waist in water. This was sport with a vengeance.

But, you see, Elmina was out to beat that fair-weather wonder, Queen. Herreshoff, who built Queen, knows how to impart speed to his products, but it is not always that he combines with this quality any great amount of weatherly ability. Cary Smith can do both, and on that tumultuous night Dennis had his chance to "show up" the Maxwell flyer. And he did. There was great racing until early evening, Queen a bit in the lead; but then came increased winds, and the tall, beautiful schooner, that was designed to live her life in more quiet environment, began to find conditions unsuitable. She began to fall off in speed. In the meantime, Dennis was nursing Elmina along, like the fine skipper he is. He had doused his topsails early in the evening and guided his craft carefully over the rough seas. By midnight not only Queen, but Vigilant, which had been doing well, were lost.

Then, with all competitors astern, Captain Dennis took in his foresail and fore-staysail and the schooner went on her course under mainsail and jib only. In the course of the gale, which began at nine o'clock, reached its greatest force at midnight and finally died out at five o'clock in the morning, Elmina ran through thunder storms, black squalls and cross seas, without the slightest damage to hull or spar and without the loss of even a belaying pin. She tacked past Cape Elizabeth lightship outside of Portland harbor at 9:30 o'clock on Wednesday morning



ELEANORA IN TOW OF THE S. S. MASSACHUSETTS.

and two hours later Captain Dennis had his craft off the Portland Yacht Club anchorage and was enjoying a well-earned sleep.

On Aurora W. B. Duncan, Jr., Cornelius Vanderbilt and Grenville Kane had an exciting night, but under the skilled and careful ministrations of Mr. Duncan this fine sloop traversed steadily on the way to Portland, each board being taken with exact knowledge of the boat's whereabouts. The wind, as stated before, had blown out the binnacle light and it could not be kept lighted. Thus the navigator had naught but the stars to depend upon, and the fact that by them he took the sloop through the smother and landed her at destination, the second boat of the fleet, is one of the finest things that have ever been set down among the annals of the New York Yacht Club.

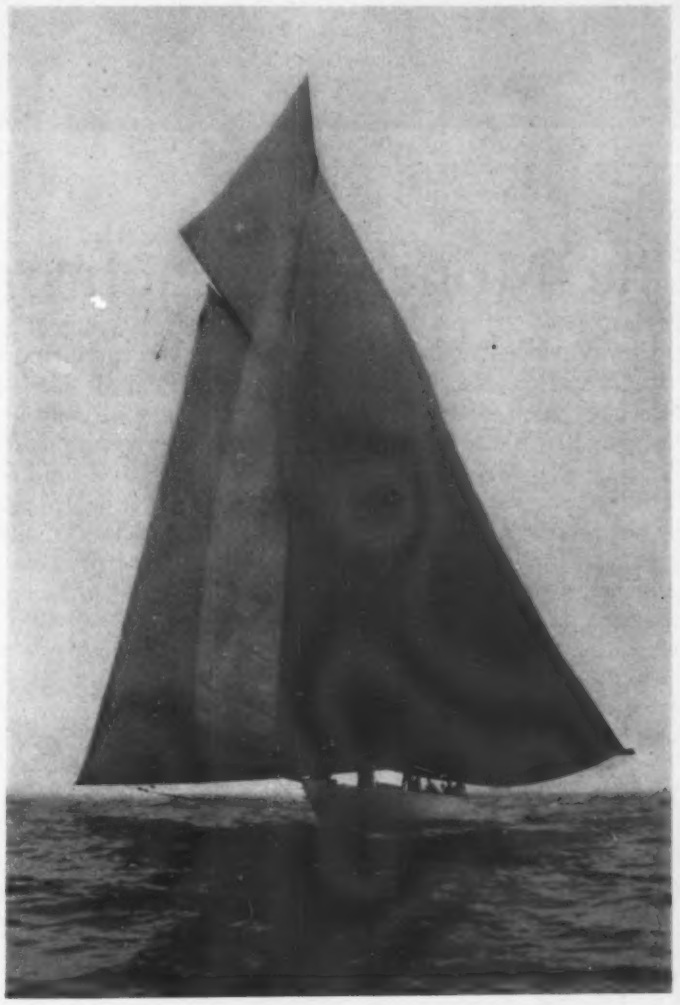
It may be imagined that such incidents as are related in the foregoing had their effect upon the yachtsmen who, either by auxiliary, sailing vessel or steam yacht, had reached Portland by Thursday morning. Ernest Lorillard and W. C. Kerr, ashore after thirty-six hours of unceasing waiting and watching on the committee yacht, C. Ledyard Blair's Diana, came ashore at nine o'clock and were congratulated on the Portland Yacht Club float by Commodore James. The Commodore, feeling that at least one day should be utilized in recuperation, decided to do away with that day's run and to proceed to Rockland on Friday morning.

And so those who had spent an arduous night loafed about the decks until four o'clock, when they were invited to the flagship Aloha to drink tea and watch the historic races of professional sailors for the owl and gamecock colors for dinghies and launches. This was a mighty fine occasion. The winds and waves had gone. Casco Bay stretched away, a sheet of pure blue, dotted with its myriads of emerald islands. The sun showered decks with pure gold; and as the fleet had been augmented by a number of arrivals throughout the day, the scene when the captains and their guests put out for the stately black Aloha, with her tall, square-yarded foremast, was as picturesque as the most ardent devotee of nautical color could wish.

There was Dallas B. Pratt, of Sea Fox; W. S. Eaton, of Taormina; Cornelius Vanderbilt, W. B. Duncan, Jr., and Grenville Kane, from Aurora; William E. Iselin, of Vigilant; H. F. Lippitt, of Winsome; George M. Pynchon, of Istalena; Lloyd Phœnix, of Intrepid, and a great crowd from the steam yachts, so that when the first dinghy load of "Scowegians" pulled up to the starting line the broad quarter deck of Aloha was crowded with a party of more than two hundred, not an insignificant showing for a squadron which had been buffeted as few fleets have ever been buffeted the preceding night.

Everyone was very enthusiastic, and the suggestion of spirit which has characterized the attitude towards racing of many of the older members of the club this year was at full blast aboard Aloha. Many were the yarns exchanged of experiences on the run to Portland, among the best being that told of the night spent by the gallant old 90-foot sloop and America's cup defender Vigilant.

After leaving Vineyard Haven on Tuesday morning she came over the Shoals with a snorting breeze, which increased throughout the day, until nine o'clock at night, when a forty-two-knot gale was swirling about the famous old sloop. Twenty miles northeast of Cape Cod she carried away her peak halyard block, caused by the breaking of the bolt. Down came the gaff and the mainsail, of course. A storm trysail was set and the old Spartan started in to buck the winds and seas once more, for Vigilant was not unused to savage seas, having crossed the Atlantic some years ago, capturing an over-sea record. Fighting along, she finally got off Thatcher's Island, off Cape Ann. Here, in tacking, her jib ripped, whereupon she cut over for the Isles of Shoals and comparatively quiet water. Under a riding sail she made slow progress, but her captain, O. B. Smith, steadfastly refused a tow until the big yawl had slipped past the regatta committee boat and had her time taken.

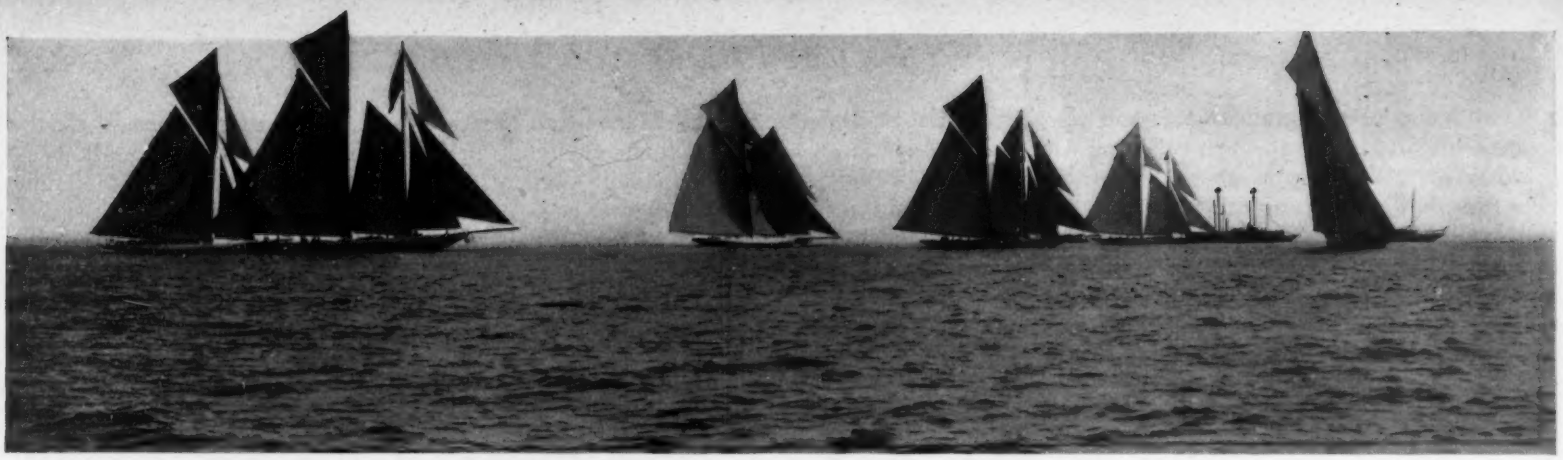


AVENGER WINNING THE ASTOR CUP.

After all this—were it not for memories of superb pictures—it would be rather a let-down to write of the previous events of this most extraordinary cruise; in fact, it is, anyway. However! The yachts, then, assembled at Newport on Thursday, about 150 of them—no craft smaller than the thirty-foot waterline sloops and most of them larger. On Friday, the races for the Astor cups for sloops and schooners was sailed, and in the large following of steam yachts was seen the first sign of the renewed interest which members of the club have taken in racing this year. Fully a dozen great steam yachts were about the line to witness the start and, as the racers covered the course, the attending boats, with the black smoke billowing from their funnels, made a picture which on a small scale was strongly suggestive of the scenes which characterize an America's Cup race off Sandy Hook. Avenger won the $500 cup for sloops, and Elmina the $1,000 schooner trophy. She won this cup, which everyone, on form, conceded to Queen, because Captain W. S. Dennis used his knowledge of wind conditions and sailed his boat into quarters productive of whole-sail breezes, while Queen was sailed into quarters where they were not. That is the whole story. Dennis has turned this same trick on Queen several times now.

The following day, Saturday, the race for the cup offered by King Edward was sailed, and George M. Pynchon won the race for his sloop Istalena by sailing his charge straight over towards Narragansett Pier, whence he expected the wind to come, while rival skippers either went off in another direction or came about before they should have done so. Mr. Pynchon's judgment exceeded even that of the sagacious Dennis, and when he made his

(Continued on page 330.)



START OF THE KING'S CUP RACE, IN WHICH SCHOONERS AND SLOOPS MEET IN ONE CLASS.

The Month in Yachting

IN the loss by fire of the auxiliary cruiser Varuna, flagship of the Chicago Yacht Club, off Traverse City, Mich., last month, we are reminded that such disasters have been all too frequent this year, and inasmuch as every accident of the kind must tend to retard the increasing popularity of craft propelled by gasolene, it is obvious that boat and engine manufacturers should leave nothing undone to insure absolute safety in this regard. I do not wish to imply that carelessness of owners is not largely responsible for conflagrations, but, nevertheless, those who produce gasolene craft should make absolutely certain that everything has been done in regard to the arrangement and construction of fuel tanks to render the possibility of fire extremely remote, even with careless persons in the boat. That fatalities did not attend the loss of the Kitcinque in the ocean race last July was pure bull luck, and in the case of Varuna those aboard the cruiser escaped in a yawl, with burns and bruises. There was a fifty-gallon tank of gasolene on board the ill-fated yacht. The party had left Chicago in the vessel to witness the naval manœuvres off South Manitou Island. The engine was giving trouble and sail was for a time largely relied upon. When the engine finally got to working again and the yacht was abreast of Northport Point, with a bobble of a sea on, there came an explosion. The three men of the party were lying on the deck at the time. The force of the explosion was great and flames burst from all parts of the craft at once. An unsuccessful fight against the fire followed, but the men were finally driven into a small boat, where they stood by until Varuna burned to the water's edge and sank. In the majority of cases where boats with gasolene engines aboard have been destroyed by fire, causes have, in the very nature of things, been hidden; but it may be set down as certain that most of the accidents have been due to leakage of gasolene, in piping or tanks, a danger which watchfulness can check.

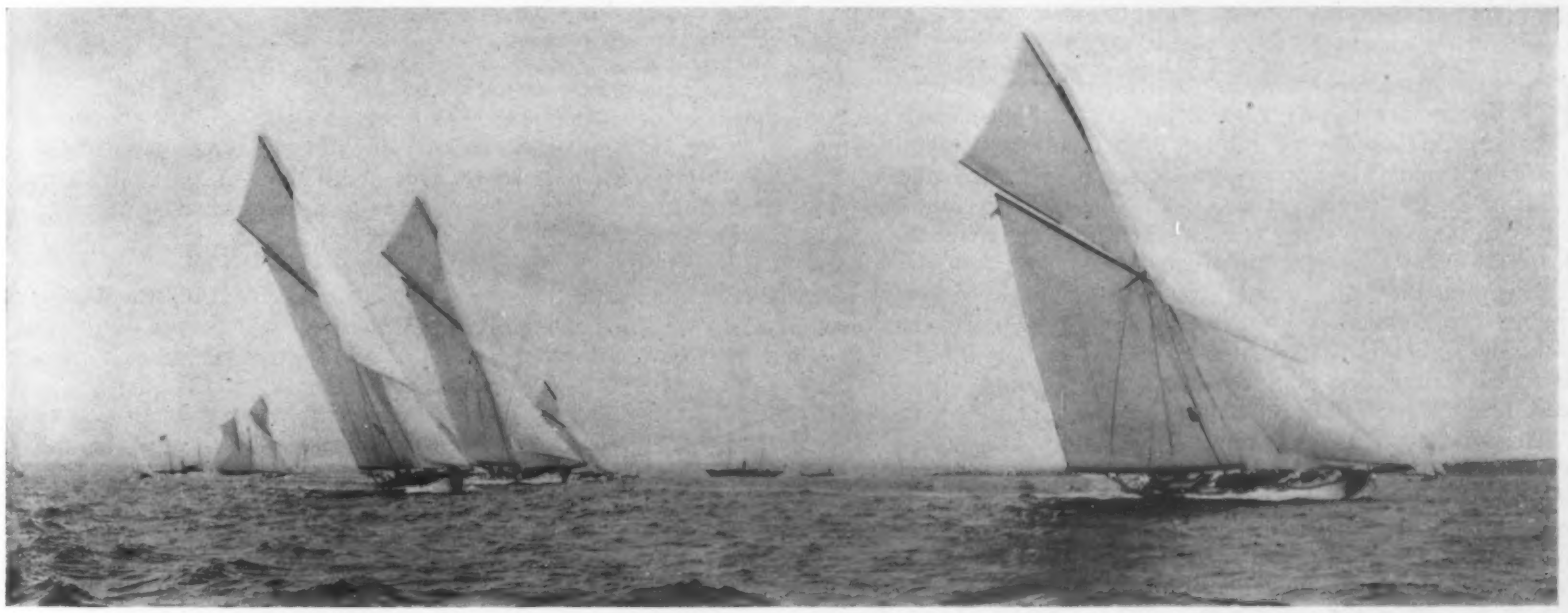
The yacht tonnage tax! Wow! You should hear the squeals that some of the big yacht owners along the Atlantic seaboard are setting up. They would move heaven and earth, if they could, to have the law declared unconstitutional, but so far it would seem that the framers of this clause did not act without soundest advice. On one point I am inclined to agree with them; that is, in the retroactive nature of the tax. By this I mean that yachts which an owner imported here from England five, ten, nay fifteen years ago, are as amenable to taxation as though they were just built abroad and brought to this country. Now, you would pronounce any new tax, say on cutlery, levied on stock which a merchant had imported years before the new tariff became a law, an injustice, not to say an absurdity. But that is just the way the tax on yachts operates. Yachtsmen who own costly steam yachts are in a fine state of mind. Several have announced their intention of taking their craft abroad, putting them under English registry and confining their cruising hereafter to waters not under the control of the United States. Patriotic, eh! As a matter of fact, one or two yachts have already been sent to the other side with scrub crews, and discerning persons who saw them go winked the other eye and bade them a fond and a long farewell. Yacht builders in the East, with such threats as these in mind, are beginning to temper their jubilant mental attitude with some sober thought. If yachtsmen take their vessels to the other side and leave them there, depreciation in receipts for fitting out and repairs may be expected next season, while to balance such dire expectations no American yachtsmen have yet announced any intention of building their steam yachts in this country hereafter. The secret of this whole matter of Americans building their steam yachts on the other side is that they can get them cheaper over there. You don't see any American who wishes to attain fame as a cup winner building a sail vessel in England. Why? Because they build windjammers here that can sail rings around the best of the British output. Or if someone taking umbrage may cite the failure of Vigilant on the other side, I am willing to qualify by saying that American builders can produce sailing yachts which have shown their ability to take the measure of anything that the Englishmen have sent over in the past fifteen years at least. As for the tax, to those yachtsmen who have not taken the trouble to study it, be it said that under its terms Americans who own foreign yachts are subject to a yearly tax of $7 per gross ton. Americans who hereafter buy yachts abroad have the right to choose between paying thirty-five per cent. ad valorem on the importation and taking out an American registry, which exempts them from taxation. The tonnage tax on vachts built in foreign lands and now owned in this country, according to the estimate of my friend Captain Summers, will amount to $235,000 a year; the tax on some of the old foreign-built tubs now lying idle in shipyards, in fact, will amount to as much as the owner would be willing to sell them for. See how some of the big yachtsmen are hit and then wonder no longer why some big yacht owners "squeal." James Gordon Bennett's Lysistrata, for example, will be assessed $13,594; W. K. Vanderbilt's Valiant, $12,761; A. J. Drexel's Margarita, $12,460; Mrs. Robert Goelet's Nahma, $12,173; Morton F. Plant's Iolanda, $11,529; Joseph Pulitzer's Liberty, $11,249; Eugene Higgins' Varuna, $11,011; George Gould's Atalanta, $9,121; Roy Rainey's Cassandra, $8,589; C. K. G. Billings' Vanadis, $7,637, and Cornelius Vanderbilt's North Star, $5,726, and so on down a very long line of yachts, most of which fly the burgee of the New York Yacht Club. It may well be that the tax of thirty-five per cent. ad valorem set down as an alternative will not appeal to the yacht owners. What then? Will they build in American shipyards? We'll see. I think that you will note no great improvements in American shipyards to handle increased business this winter.

How often luck figures in deciding a yacht race! A sudden shifting of the wind in favor of a yacht hopelessly down to leeward is usually a cause of undeserved congratulation for a skipper whose friends slap him on the back and tell him his judgment of wind conditions is unsurpassed. Or a leading vessel gets hung up in a tide rip, while the rival, seeing the plight of that vessel and far enough astern to avoid the leader's course, romps home on a new tack and receives compliments for his acumen. Out in Chicago the other day everyone was talking about Spray's first victory in the first of the Lipton Cup series. Some maintained that a sudden shift of wind, unlooked for by every contestant, pushed the Price "speeder" into the lead and threw I. A. C., until then the leading boat, out of the contest. Others asserted that Spray won because she used her headsails with better judgment and that she was sailed by a man who knew where to look for wind. Whatever be the merits of either contention, Spray certainly was favored by one great stroke of good fortune. No sooner had she crossed the finish line in first place than a turnbuckle lug on the main shroud broke, making it necessary to lower the mainsail on the jump. If the thing had broken while the yacht was racing, the chances are that the slackening of the stay would have dismasted her. One hears of so many cases of this kind that often he half believes that yachts, like persons, key themselves up to a supreme test, come through it gallantly with flying colors, and then, when the fight is over and victory won, collapse. In the second day's racing occurred another anomaly which is frequently noted in yacht races, the failure of boats to which conditions seem eminently suited and the success of boats not accounted at home in those conditions. Columbia and Jackson Park, for instance! Great rough-weather boats they! Everyone expected them to walk away with all honors when the second race was started. The going was exceedingly rough and the wind was high. What happened? Columbia early had her rudder carried away, while Jackson Park's spinnaker guy deck cleat pulled out, spoiling her chances of victory. It's all in the game, and that there is so much of the unexpected makes it all the more interesting.

I have had occasion before to speak of the great improvement which George M. Pynchon, of Istalena, has shown in each season since he came on here from Lake Michigan. Now he has the supreme honor of having sailed his sloop to a King's Cup victory. He had the nerve to stand way over to Point Judith, where he knew that the tide was not running so strong, but where he felt that there would be better wind. Queen, meanwhile, had been fighting with Elmina and had weathered her. This placed her in a position to cut across Point Judith and head off Istalena. But Queen was afraid of Elmina, and her skipper, J. Rogers Maxwell, took little account of the sloop. So when Elmina tacked to the eastward, Queen, not wishing to let her get too far away, tacked also, leaving Istalena to sail where she would. That settled the race then and there. No boat after that had any chance to head off Pynchon. Like the true sailor he is, Mr. Maxwell admitted his error after the race. He makes so few of them that he can afford to be candid.

Extended mention is made elsewhere of the New York Yacht Club cruise with the Astor Cup races, won by Avenger and Elmina, and also of the cruise of the Seawanhaka Corinthian-Philadelphia Corinthian Yacht Clubs. If the New York Yacht Club goes to Maine again next year, as I can state on good authority some of the officers have a mind to do, the Oyster Bay and Philadelphia organizations will repeat this year's Sound cruise, and that will be a fine thing, for it was a most successful jaunt.

As was generally expected, Windward, designed by William Gardner, took the measure of the Herreshoff 31-footer Naulahka in the races for the Manhasset Bay Cup sailed off the beautiful home of the Indian Harbor Yacht Club at Greenwich, Conn. Addison Hanan held the stick of Windward, while Stuyvesant Wainwright guided Naulahka. Mr. Hanan had the disadvantage of commanding a boat practically green, Windward having been ordered late in the season and put in commission only a week or so before the time scheduled for the cup series. Nevertheless, the genius of Gardner prevailed, and gave warrant to the opinions of those who have long held that the abilities of the New York designer are not second to those of any designer in the world. Light airs unfortunately characterized both race days. On September 8 in a light easterly breeze the two sloops were sent away on a windward and leeward course of 16 miles. Through her ability to point higher and to foot faster with the wind astern, Windward had the race well in hand at all times until within an hour of the finish, when varying winds placed the boats practically upon even terms. Thereafter it was a case of seamanship and some degree of luck, both going to the credit of Mr. Hanan, who jibed his sloop over the line a winner by 58 seconds. The second race, over a triangular 20-mile course, was started in another light easterly breeze. Windward crossed first, and the advantage which she then gained she never lost, winning the race and retaining the cup by 1 minute 20 seconds.



START OF SLOOPS, ASTOR CUP RACE.

ELEANOR, ONE OF THE LATEST TYPES.

COMMODORE W. F. BISHOP'S LAUNCH SPRAY, MUSCATINE, IOWA.

Motor Boats on the Mississippi

By E. PERCY NOËL

Photographs by the Author

ON the Mississippi there are but few river people who cannot remember the days when the craft of gasolene was regarded as a very fallible toy; from the beginning the motor boat made slow progress as a means of transportation and pleasure on the mighty stream, which ever flows southward to empty through many mouths into the Gulf. Even after the motor boat was firmly established in other waters, it was not considered seriously on the "Big Muddy"; for conditions were very much against the innovation. No one believed that the current ever would be successfully navigated by any type of craft but the flat-bottomed steamboats, that are practically the same to-day as they were when Mark Twain piloted one of them for his living.

The Mississippi as a navigable stream has changed little in the hazards that it offers the amateur. True, the United States Engineer Corps has been at work, and so has the Lighthouse Service—they are still doing the best they can—but the problems presented by the dams, or "dikes," as they are sometimes called, and the light posts and day marks that go with them, are pretty nearly as difficult for the amateur boatman to overcome as the hazards of navigation in earlier days.

Perhaps the presence of dams, constructed of reef-like rocks, present as serious a problem to the uninitiated as shallow waters of other days; but to the boatman who makes a study of the principles of river navigation they become a help. On each side of the stream, according to the location of the channel, there are light posts and day marks, and at low water there are barrel buoys on the ends of dams.

The light posts—so called because they are white posts to be visible by day, yet capped with lights at night—are the commonest signs of the lighthouse service. The day marks, instead of lights, are large white-painted squares on the top of posts, with one pointed corner turned down, so as to present what at first looks like a diamond. These squares are placed at angles to indicate the direction in which to steer. Where there is one there will be found another on the opposite side of the river, and the angle at which the square is fastened to the post will correspond to the square on the opposite side. It is important, in order to avoid dams or sand-bars, to steer straight from one to the other.

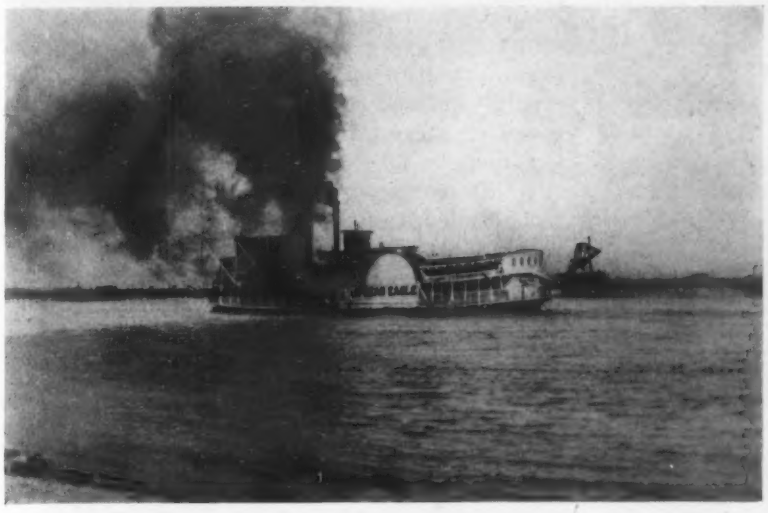
In navigating it is enough to steer to a point about 200 feet from whatever shore mark is the objective point. With the water marks it is a different matter, and they can be taken closer; but as these marks are apt to shift, particularly when the river is rising, it is well not to press them too closely.

But it is not the lights and channel that have made the motor boat come into its own on the Mississippi—and if it has not really stepped into its place, rapidly it is finding it—but the utility of the craft itself. Of course, there have been causes that contributed to its success, just as in other parts of the country. Perhaps, for example, no people needed the motor boat more than the Valley people, who to a large extent were without nautical diversion. There was nothing for them but the rather antiquated river boats—many of them in service for half a century, as their appearance or arrangement forcibly testify.

Take St. Louis, a city with a great deal of water around it.

ST. LOUIS BOATS AT ROCK ISLAND, ILL.

START OF 36-FOOT CLASS. MUSCATINE LAUNCH CLUB.



FLAT-BOTTOM STEAMBOATS, PRACTICALLY THE SAME AS IN THE DAYS OF MARK TWAIN.

Before the motor boat came there was no opportunity for amateur river sport except rowing in shells, which never has been very generally practiced. St. Louis, besides, has no convenient resorts where pleasure-seeker or vacationist may enjoy yachting, or other marine sports that the successful summer resort provides. At least, it had not before the advent of the power boat.

Now, a man with a boat has the whole Mississippi at his service and the Illinois River, with its connecting canal, that will take a power boat into Lake Michigan. If the current runs at six and eight miles an hour at times, the gasolene motor can overcome it; and if there is some uneasiness on this score at first, a pair of good anchors, conveniently placed on the bow, soon removes it.

FISHERMEN'S BOATS ON THE BANKS OF THE MISSISSIPPI.

Last June-July the St. Louis Power Boat Association sent eighteen power craft up the river as far as Burlington, Iowa, to attend the national regatta of the Mississippi Valley Power Boat Association. Nine of the fleet went north as far as Rock Island, Ill., some 350 miles from the starting point. With a single day's exception the nine long-distance boats made the runs from day to day on scheduled time, the nine motors sometimes purring steadily for 12 to 14 hours, without more than an hour's pause in the middle of the day. Some of them, indeed, often ran throughout the day—once a 72-mile run against the five-mile current—without stopping. And no one, with the single exception, already mentioned—a boat that broke a crank-shaft—complained of troubles. The current-bucking became a pleasant thing and the cruising boatmen almost forgot that they were doing something that had never been accomplished before.

The type of craft in use on the Mississippi is not a settled one. The inclination has been towards the old-time glass-cabin cruisers—boats with an average horsepower of 20 and 35 or 40 feet in length, with a beam of four to five feet. It is a homely, uncomfortable craft, but cuts the water well, and makes good time against the current. Yet this boat seems to be passing and there is a demand for something more comely, more utilitarian, than this.

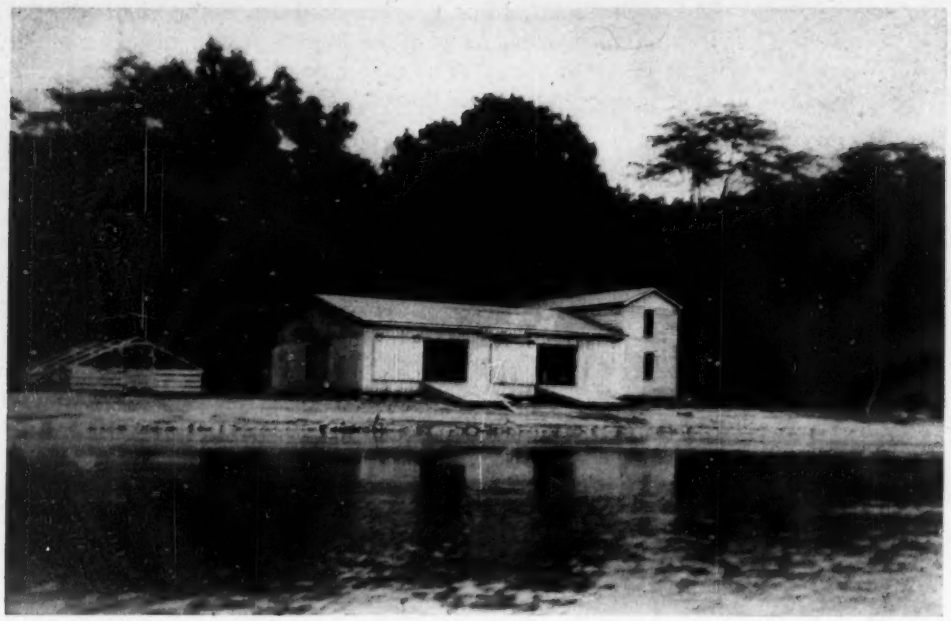
Above St. Louis, some two hundred miles, the current is less swift and this year one can see hunting-cabin boats gradually coming into use there. The majority of these are rather crude in model and rough in workmanship; they appear to be the first attempts of the Valley boat builders at making this type of craft, which has become the standard in so many waters.

The argument advanced against the hunting-cabin type is that it is not cool below and is too wide to make time up the river. Yet the arguments in favor of it are many, and it will probably not be long before it becomes, with modifications, the accepted river type. There are several points which, to succeed here, this boat should embrace. In Mississippi boating, many landings are made on the soft mud bank, or the gradually sloping levee, and for this room is needed on the bow for a man to stand forward of the house. The bow should not be too high for the same reason. Around the house there should always be a washboard on which it is fairly easy to walk by holding on to a rod fastened to the house. The house should be arranged so that square or oblong windows may be had instead of port-holes, so that plenty of air may circulate through the saloon and galley and out the hatchway. Head-room of six feet three inches is, of course, necessary. The cock-pit should be large enough to accommodate a dining table and seating room for the number of passengers that one expects to carry with him in cruising.

The draught of the boat is limited to three feet six inches, or four feet at the very most, while three feet will make things easier for the navigator of Western rivers. A beam of nine feet on a 35 or 40 foot boat is not too much if a motor of 16-horsepower is installed. But the man who installs a smaller engine in a boat of such dimensions should confine himself to the upper Mississippi, where the current runs more slowly, or to the tranquil tributary, the Illinois River.

The Illinois River provides pleasant running for the motor boatman. It is an attractive stream, with trees overhanging and shadowing it. The water sometimes approaches a light olive green in color and looks soft and friendly. But the scenery of the Mississippi rivals that of the Hudson. In some places the ruggedness of the white-faced cliffs is enhanced by the wildness

INCLINATION HAS BEEN TOWARDS THE OLD-TIME GLASS-CABIN CRUISERS.



THE RIP-RAP LANDING ON THE MISSISSIPPI RIVER, ABOUT 85 MILES FROM ST. LOUIS.

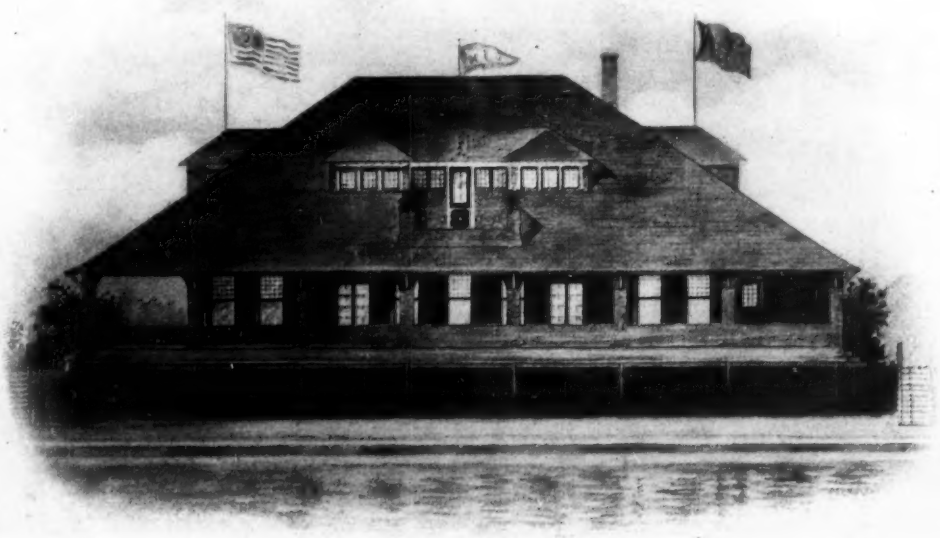
of the green foliage above and on fair days the blue sky and occasional banks of clouds make a symphony of color. The river towns, particularly the smaller ones, are rare pictures. One finds them set at the base of hills, whose faces are often white-spotted with stones. Sometimes there are three of these hills, like pyramids, shielding, as it were, the little town at their feet. And, if one lands, he will find kindly, hospitable people and good things to eat for little or nothing. He will find sympathy, too, for these people have become acquainted with the motor boat. It has added something to their lives and they appreciate it. What matter now about the railroad six miles away, or the steamboat that calls but once a week? It is easy to get there in the motor boat. And there are always two or three to be found, no matter how small the town. I speak of this because it is a part of what has come in the last few years. It is an old story in Eastern waters and on the lakes; not so on the Mississippi. The motor boat had a severe test when it encountered the "Big Muddy."

Some of the river cities have power boat associations, affiliated with the Mississippi Valley Power Boat Association. Perhaps the Burlington (Iowa) Association is the most flourishing of these, but the Muscatine (Iowa) organization has the best club house. It is a $10,000 building, and there are large floats below it for the accommodation of boats. The club house is located in the most convenient place possible on the levee, and the members, under the leadership of Commodore Bishop, are hospitable and enthusiastic. The clubs at the tri-cities of Rock Island and Moline, Ill., and Davenport, Iowa, are not equally significant—at least so it appeared to some of us on the St. Louis Power Boat Association cruise—but there are good facilities for tying up safely at the Rock Island organization's floats. At Fort Madison one finds a wildly enthusiastic aggregation of boatmen and every courtesy possible is shown to the visitor. Commodore Dixon, of the Burlington Association, the recently-elected president of the Mississippi Valley Association, is a man after the boatman's heart and his associates are with him.

The St. Louis Power Boat Association, although a promising organization, has not assumed the proportions that are fitting for a city of the size of St. Louis. But everything has been against the power boat at St. Louis, as far as the water is concerned. The river runs very swiftly, as fast as seven and eight miles an hour at times, though averaging something nearer five, and it is very muddy, due to the influx of the Missouri above North St. Louis and a few miles below Alton, Ill. For this reason a number of St. Louis boat owners keep their craft at Alton and when they wish to get on the water take the train or trolley to Alton. In this way the 26 miles of upstream running, in the least attractive part of the Mississippi, is avoided; but this weakens the strength of the St. Louis organization.

Forty-one miles from St. Louis, by the Light Book, is Grafton, Ill., at the mouth of the Illinois River, and this is frequently the objective point of St. Louis boats. The Illinois River provides a means for St. Louis boatmen to run through the Great Lakes and down the Hudson to the Atlantic Coast, and when the type of boats in common use now changes to something more capable of standing rough water, it is probable that the pennant of the St. Louis Power Boat Association, and the pennants of other Mississippi clubs will not be unknown in the North and East. The boatmen further north have the Hennepin Canal to take them to the Illinois River.

The first thing for a visitor in Mississippi Valley waters to do, is to acquire a Light Book, officially known as "List of Lights on the Western Rivers." It will be sent free to any pilot or master by applying to the office of the Lighthouse Board, Department of Commerce and Labor, Washington, D. C., or to the office of the Lighthouse Inspectors at Cincinnati, St. Louis or Memphis. The Light Book gives the navigating course down stream, with distances, but it is a simple matter to reverse by reading up the page instead of down, and from the back to the front of the book. This corresponds to the United States Coast Pilot, which is used so much on both the Atlantic and Pacific Coasts.



MUSCATINE LAUNCH CLUB.

The Mississippi is navigable to the northward to Minneapolis and St. Paul, while to the south one can cruise in a motor boat to the Gulf and thence through the protected waters of Mississippi Sound to the west coast of Florida.

From Put-In-Bay to the Welland Canal

A STORY OF HOW FIVE YOUNGSTERS IN A YAWL LED THE FLEET DOWN LAKE ERIE

By C. H. J. SNIDER

TUCKED away in the sheltering arm of Put-In-Bay, in South Bass Island at the west end of Lake Erie, the yawl Girlforme, of Toronto, tugged impatiently at her anchor chain one Thursday afternoon in July. The big international regatta was over. We, in the Girlforme, had come three hundred miles to attend it. We had had the "time of our lives," in a way—at any rate, a very good time; but we began to feel home-hungry, like the rest of our Canadian fleet.

Naomi had gone and was some place hull-down in the windward horizon; Zahra had started and could still be seen laying down to her work with her topsails clewed up outside of Ballast Island; Crusader was sailing around her anchor, to the great disgust of her crew as they tied in the double reef in her mainsail and bent on the No. 2 jib, taking no chances on having to shorten the racer down outside. So it looked as though it was "Time For Us To Go," although a snug mooring around us and a hard head wind outside were temptations to linger.

WORKING OUT OF PUT-IN-BAY IN SHORT HITCHES.

Girlforme, a 37-foot deck measurement centreboard yawl of the compromise fin type, with a 10-horsepower gasolene auxiliary engine out of a Cadillac automobile, boasted a crew of five. Our total ages just fell under the century mark, so she was not overballasted with years. The Skipper was owner and master. The First Mate was his young brother. The crew consisted of the Big Sister and the Little Sister, and the Old Man. He was not of the family, but was treated as such. It was a side trip of his, by steamer to Cleveland, that had kept us waiting after the regatta was over. When he came aboard with the mail we were all eagerness to start for home.

"Jarvis says he expects a shift," we told the Old Man, and that settled it as far as weather was concerned. The veteran skipper of the big schooner Zahra ought to know his business, although there was no sign from heaven to justify his conclusion. "And the Naomi boys say they are not going to stop till they reach the canal," we also announced. That settled it as for company, for where the Naomi, the next smallest of the fleet could go, Girlforme, the smallest, must and would, the Old Man said. Not that he was her skipper, but being the oldest mariner in the crowd—nearly thirty was he—much of her ship-conduct was left to him, and he would have mourned—openly and above breath likely—had her owner and master wanted to do anything else than send her after the vanguard.

So we stowed a solid meal under hatches and then put everything away and battened down for rough weather. We set the mizzen and mainsail, hove her short on her anchor, gave her the jib, broke her out and swung her off on the port tack, working out in short hitches through the still crowded anchorage, passing one by one the lingering Canadians—Aggie and Zelma, the big cutters, and the glittering mahogany sloop Eleanor, and the black-and-white twins Dinah and Norah, of Port Stanley, who, together with the hundred American sail, steam and gasolene craft, had decided to hang on for fairer weather.

As we drew clear of the haven entrance and felt the sweep of the Lake breeze, Crusader was a couple of miles ahead of us and seemed to have all the sail she wanted with two reefs in, but we clung to our whole rig, not from bravado, but because we were an able crew. The Lake, sheltered here somewhat by the numerous islands, escaped the full force of the wind, and only occasionally turned up in short, snappy whitecaps. Our boat was a stiff sail carrier, and we had no hesitation in giving her everything she could stagger under, while the wind promised to hold steady as well as strong. Time enough to shorten down and "let her run easy" if it blew up squalls. We were quite content if we could see the lee rail occasionally.

We had cleared for home with open minds as to our course—north shore by preference, because we didn't know it and wanted to learn, south shore of necessity, if the weather insisted. Once well clear of the Basses we saw Crusader stretching like a greyhound up under the lee of far-off Pelee Island, hunting smooth water. That meant Canada at least, and for the time a nearer approach to home; but it was a course that, continued, would take her to leeward—and it had to be continued if she was to gain any port. The Skipper had a strong feeling against lying at anchor overnight off a bare shore, in the lee of Pelee. For the Canadian shore—once you pass what sailors call "The O," that is Rondeau Harbour—offers you no shelter until you gain Port Stanley. To thread the sandbars even as far as Rondeau, with a strong head wind and at night, was no attractive prospect. So, at dusk, when we had drawn the tail of Kelley's Island just abaft our weather beam, we split tacks with Crusader and stayed ship, just squeezing to windward of the guardian gas buoy off Kelley's Island Shoal and being rewarded, as we ploughed onward, by steadily repeated flashes from the monitor of Marblehead and the glow in the sky that told of the lights of Sandusky haven. The night was dark but clear, and as we drew out from Kelley's Island the lights of the far-off south shore of

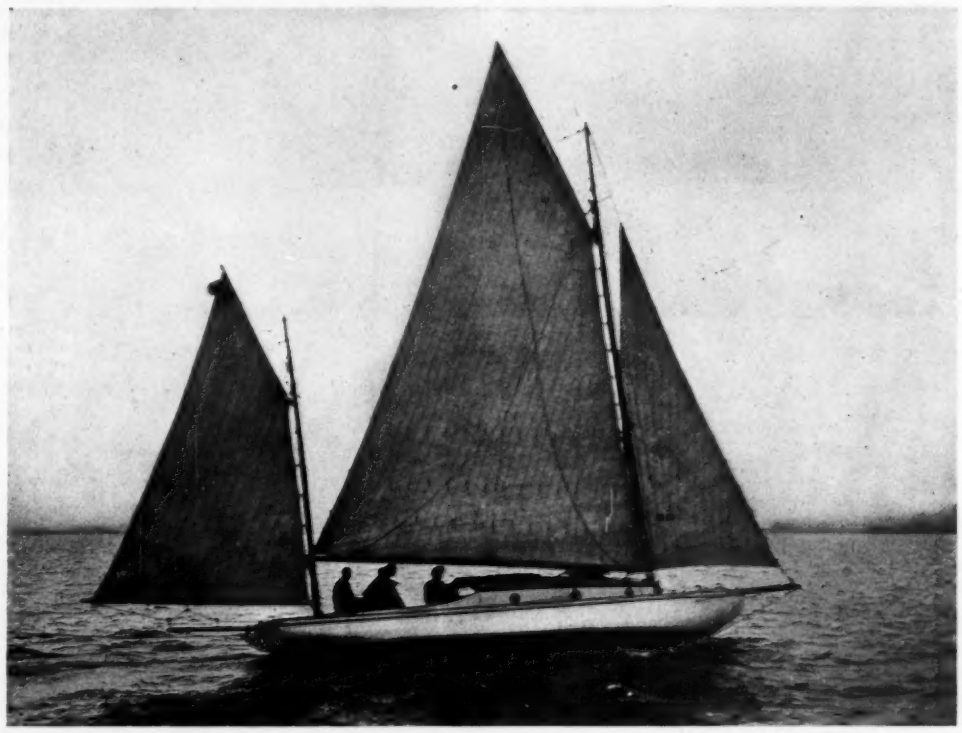
THE HARBOR AT PUT-IN-BAY.

A CLOSE REA THE M

THE MARK.

Lake Erie winked faint welcomes to us. The sea in the Lake was not heavy, the wind was only a whole sail breeze, and the yawl was making east, and east-by-north at times. At that rate we would be up with Lorain by early morning at the latest, biting off fifty miles or so of our homeward journey. And so we settled down for as much sleep as possible until we should get there, the Old Man and Skipper taking watch and watch, or rather trick and trick, for in such a boat as Girlforme the helmsman, except under extraordinary circumstances, is also the lookout, and the rest of the crew may sleep. The Skipper had not yet turned in when an uneasy conscience prompted the Old Man to ask, "Do you remember those fish stakes between Lorain and Vermilion?" Fish stakes, the plague of Lake Erie, abound all along that stretch of the south shore. Reaching in from the Lake to Lorain from the north side of Kelley's Island you might go clear of them; and you might be able to see them in the dark if you did fall foul of them; but previous experiences had made us cautious, and after a short council of war it was decided to give up the alluring prospect of making Lorain in the first jump, and content ourselves with the mediocre performance of reaching Vermilion, with a good night's sleep as a consolation prize.

Vermilion, according to the dead reckoning, must have been about two points under our lee bow. So we started the main and mizzen a trifle and kept her away on a close reach. Lord, how that boat did travel! It was blowing a piping breeze, remember, and she lay down, especially when she would slide along the lee side of a sea, until it looked as though she would drown her starboard sidelight. She was running so fast that her propeller scarcely got any thrust on the water, so the engine, which had been helping her when by the wind, was cut off. The crew abandoned weather berths in despair, and everybody began hunting for the red pierhead light that appropriately marks Vermilion harbor. The foam boiled up in a seething river all along the lee side of the house and flowed aft in a mill stream, and the Old Man, grinding away on the weather wheel, loosened the hood of his soul a little and let the roaring night wind and rushing waters flood him with their music. It was good to be alive.



GIRLFORME WAS AN ABLE LITTLE YAWL.

We picked up the light—to leeward of us, of course, for she had been carrying a weather wheel and clawing out to windward all the time—and we bore away a little for it, getting a further start for our sheets. It was still the Old Man's trick as we neared the pierhead, four bells not having struck yet, so the Skipper went forward and conned the ship and began to give pilotage calls.

"Look here!" sang out the man at the helm, "if you're going to take her in, come aft and take the wheel; if I'm doing it, leave me alone!"

Whereupon the Skipper did one of the only two things possible; he relapsed into silence, and did not split the helmsman's rebellious head open with a handspike, as marine etiquette demanded. Accordingly, Girlforme took the narrow entrance to the harbor like a bolt from a bow, shooting up the winding river mouth with the Old Man standing on the break of the cockpit, steering with one foot, and running a monologue somewhat in this fashion, the crew working like noiseless, well-regulated clocks:

"Give her the engine now!"
"One hand shorten the dinghy painter."
"Main throat and peak halyards, stand by!"
"Ease off the lee lift, man downhaul and lower away!"
"One hand stow the mizzen."
"Jib halyards and downhaul!"
"Stand by to cut off the engine!"
"Lines and fenders, starboard side!"
"Cut off power!"

And, with a final roll to the wheel, he threw her alongside the wharf, hopped ashore with the forward line, prowled around in the darkness, located a spile at last, slipped the bow line over it, and sang out, "Haul in and make fast!"

"Haul in and make fast," re-echoed the Skipper cheerily, and we all felt that the weather had cleared.

It was snug to lie in port that night—we were moored, then fed by the indefatigable Big Sister and under blankets by eleven—while the northeaster sighed through the shore trees and the breakers boomed along the stone slabs of the pier and the shingle on the beach, rumbling of helpless hulks they had mangled long ago and chanting their age-long Saga of Strife.

The following morning it looked to be blowing a moderate breeze out in the Lake from the old quarter, northeast.

It was manifest foolishness to send Girlforme across the Lake and wind up, after a long sail, on an unknown shore, with no port for many miles, so with regrets at being forced homewad along the south-shore route, we put her by the wind on the port tack, and with all sail and the engine going, began to tear off a five-knot gait against a bumping head sea.

The weather wasn't bad. There was only a whole sail breeze, and the sea was not enough to bother her, although it kept her wet forward; but we didn't care. We had her battened down, everything well stowed, including breakfast, and we figured on making Cleveland at any rate. We got all the offing we could, keeping her hauled as close to the wind as she would go, stealing a little, as you can with the auxiliary running, by letting her shake occasionally. In this way we were well out in the Lake when we passed Lorain pierhead. We saw never a gleam of canvas and concluded that the others must have sailed all night, or else were lying in for a fair wind. Below Lorain, however, it freshened, steadily but persistently. The sea made up very

quickly, washing her forward completely, and the lee deck vanished for the day. The Lake was one mass of fluffy, dull-white crests, bursting from a field of sodden grey, while here and there a patch of lurid green reflected the purple of a waterladen squall cloud. There was no one particular outburst threatened, just a solid, business-like northeaster, a very satisfactory wind when "fair," on the Lakes, and a very stubborn foe when ahead.

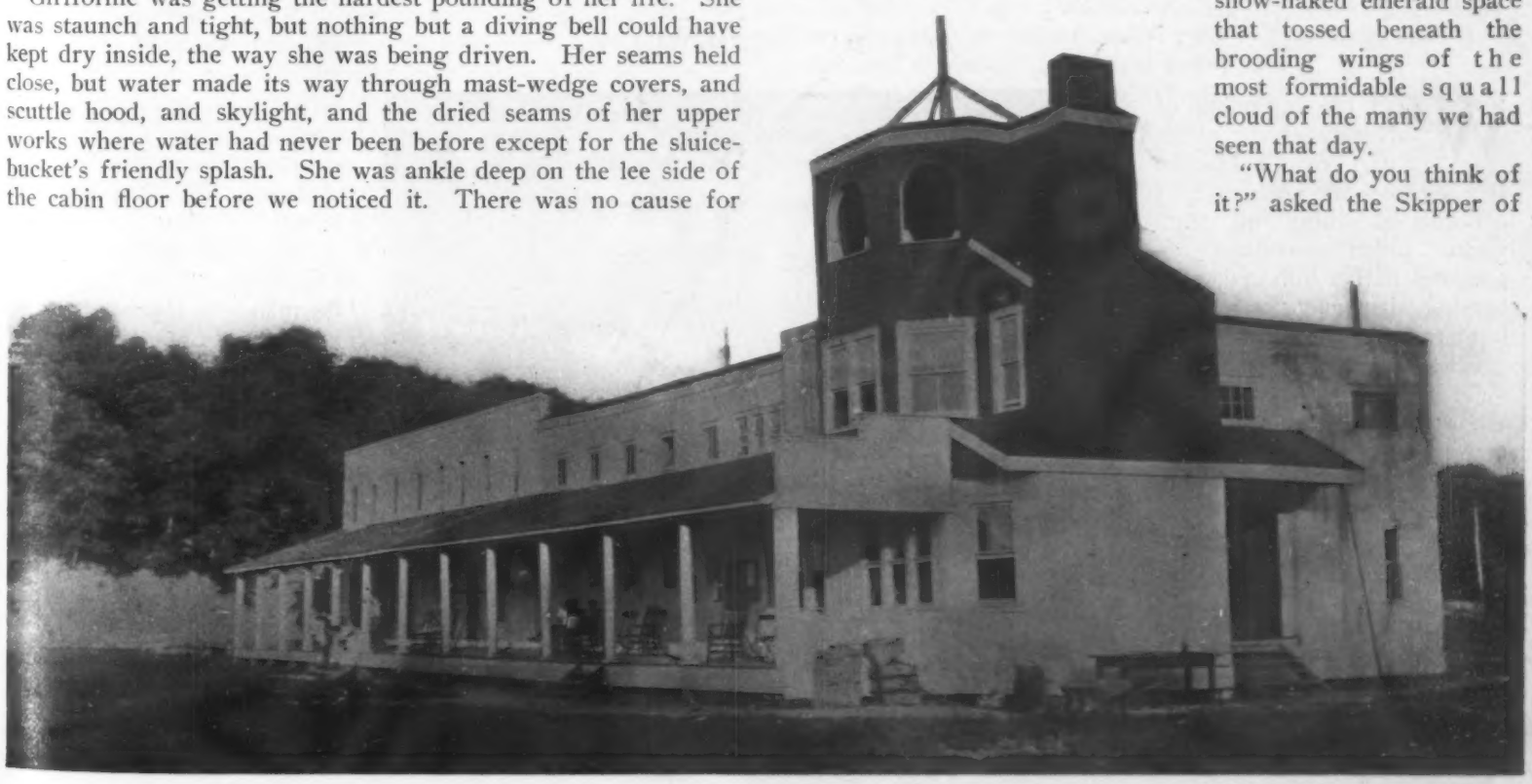
Partly to give her a rest from piledriving, for she was bucking the seas like a broncho, and partly because we had hauled pretty well to windward of the shore, which trends off here to the southward, we gave a little start to the sheets, and a spoke of weather wheel. She did some tall traveling, and in smooth water we would have had a grand sail, but she was throwing spray as high as the second reef in the mainsail, and rolling so as to put a heavy strain on the spars. The Old Man suggested shortening her. We settled away on the main halyards, hauled out the clew earring with a watch-tackle, and then slowly tied in the points. It was a sousing job, for the spray drenched us working forward on the weather side of the boom, and, if we tried it on the lee side aft, we stood in a running river of foam and water, for she was frequently buried up to the cockpit coaming. However, we got her reefed somewhere below Avon Point, and then hauled her out into the Lake as well as we could. It seems the mizzen sheet had ridden on the belaying cleat, and the Skipper at the wheel, in response to repeated calls to keep her full—she was jumping so that the reefers could not keep their feet unless the sails steadied her—had been obliged to make more leeway than we wanted, not knowing of the extra start to the mizzen. But we got her trimmed down for a hard beat to windward again, and went driving into it, awash all the time, the canvas on the cabin trunk deck crinkling up with the working of the little ship, tug-boat-built though she was, the gale whistling a shrill accompaniment in the taut weather shrouds to the churning drone of the Cadillac, manfully throbbing away at its duty down below. The spinnaker boom, lashed on the lee side, went adrift and was half way over the taffrail before we recovered it, but, by dint of much submarine exploration, we moored it fore and aft to the lee scuppers, and turned our attention to the pumps.

Girlforme was getting the hardest pounding of her life. She was staunch and tight, but nothing but a diving bell could have kept dry inside, the way she was being driven. Her seams held close, but water made its way through mast-wedge covers, and scuttle hood, and skylight, and the dried seams of her upper works where water had never been before except for the sluice-bucket's friendly splash. She was ankle deep on the lee side of the cabin floor before we noticed it. There was no cause for alarm; but a water-laden boat has no bounce to her, so down we ducked with hand pump and bailer to free her. That usually trim cabin, a veritable sea parlor, with its plush cushions, pile carpet and silk curtains, was a heart breaker to work in now. The dry-goods had been prudently stripped from their positions previously, and the bilge water swashed and swirled over the bare floor boards like backwash on a beach. The place reeked with the smell of the timbers, the odors of engine oil, raw and burnt, the exhalations of innumerable explosions of carbureted gasolene. The steady roar of the water racing by just outside the planking, the broken crashes of waves on the deck and cabin trunk, mingled with the purring labor of the engine, is as weird a harmony as crazed Peer Gynt in the hall of the mountain king. In the thick of these smells and sounds we took turns at swabbing her out, the strongest stomached below, filling buckets; the more dainty nostrilled braced in the companionway, emptying them as they were passed up. To the wheel clung the Skipper, grim yet glorying in a struggle not unfamiliar quite, but still retaining its pristine charm—the wrestle with the elements.

We reached down and weathered Rocky River. We could see its headland jutting out, one solid object amid the swirl of waves and trees along a storm-smitten shore. The Skipper loathed Cleveland's smoke. He would gladly have put into the Lakewood haven, but the Old Man urged him to hang on for another hour or so, pointing out with some reason that it would probably be necessary to sleep ashore that night after the drenching of ship and crew, that Cleveland harbor was easy to take and Cleveland hotels were easy to find. Of course, he spake as a man; feminine wisdom might have reminded him that the passage of bedraggled persons from a waterfront landing to an uptown hotel is not provocative of mirth on the part of the parties of the bedraggled part; but the girls of the Girlforme were of other mettle, and interfered naught.

To make Cleveland meant tacking ship and standing out into the angry Lake, for the shore from Rocky River runs lakewards somewhat as you come from the west, and we stood to be embayed. So with some reluctance we stayed her, with never a hitch or a hint at irons, and sent her diving out into the threatening snow-flaked emerald space that tossed beneath the brooding wings of the most formidable squall cloud of the many we had seen that day.

"What do you think of it?" asked the Skipper of



HOME OF THE LAKEWOOD YACHT CLUB AT ROCKY RIVER.

the Old Man. "Just plain wind," said that worthy, slowly. I mean there's nothing vicious in it. We haven't too much on her for the weight of it, and we may pull clear of it altogether."

So, hoping that we would, we followed the only course open, standing out on the starboard tack still, making sure of no lee shore to worry us, even if we should have to strip to bare poles.

This starboard tack tested her, however. She had to take the seas almost end on, and with her engine running she hadn't time to pick herself up for each one. Everything was awash, of course —weather and lee—and we began for the first time to be keenly anxious for the welcome words, "Ready about," which would mean that we were far enough to windward to make Cleveland harbor on the next leg. There wasn't much extra wind in the purple squall cloud, but it kicked up a whale of a sea—very steep, very confused, and very snappy. All hands stood by until the puff was over, and then we resumed bailing, with the comforting reflection that the Cleveland waterworks crib, the west one, was almost abeam of us, and, as soon as it was one point abaft, we could stay her for the harbor entrance. The Old Man, expressing a fondness for a job that would warm his feet, ducked below, and could be heard swashing about happily in the lukewarm bilge water, scooping up a bucketful from the lee side where the floorboards had been removed, so as to get that side clear before she would go on the other tack, necessitating the lifting of the opposite flooring. Suddenly came the hail: "Here! Quick!" and up he came on the run. "The dinghy's gone!" was the news.

"And the mizzen sheet!" added a messenger of woe.

There was not much time for more than sea politeness. "You," quoth the Old Man to the Little Sister, "Watch that dinghy, no matter what else has to be done!"

"Better take in the mainsail," was the Skipper's good suggestion. There was not much left of the double-reefed sail to stow, and it was soon in gaskets.

The dinghy painter, ere it parted, had fouled the boomkin, capsized the outboard sheet block, breaking the mousing and wrenching the block from its moorings. The mizzen sheet was intact, but had no purchase on the boom, owing to the destruction of the outboard lead.

Once the mainsail was stowed, Girlforme went after her runaway. The keen-eyed watcher had not lost sight of the boat amid the confusion of sail handling, although the dinghy disappeared completely in the trough of the sea. The mizzen sheet was started, and the yawl, steering very hard for some reason or other, ran off to leeward like a scared gull. First time we tried to round up to leeward of the dinghy she made a tremendous sweep, and had to be stayed to fetch anywhere near it. The crippled mizzen sheet could not flatten the sail sufficiently and she fetched to leeward. Then we got the sheet flat, and she went to windward of the mark, despite the wheel.

"I can't make her answer," called the Skipper in wrath.

"Now she carries a weather wheel like a catboat, and a while ago she had a lee wheel hard over all the time!" And the Old Man also raged because the mizzen sheet, which he had always trimmed with ease, now mocked him and the whole crew.

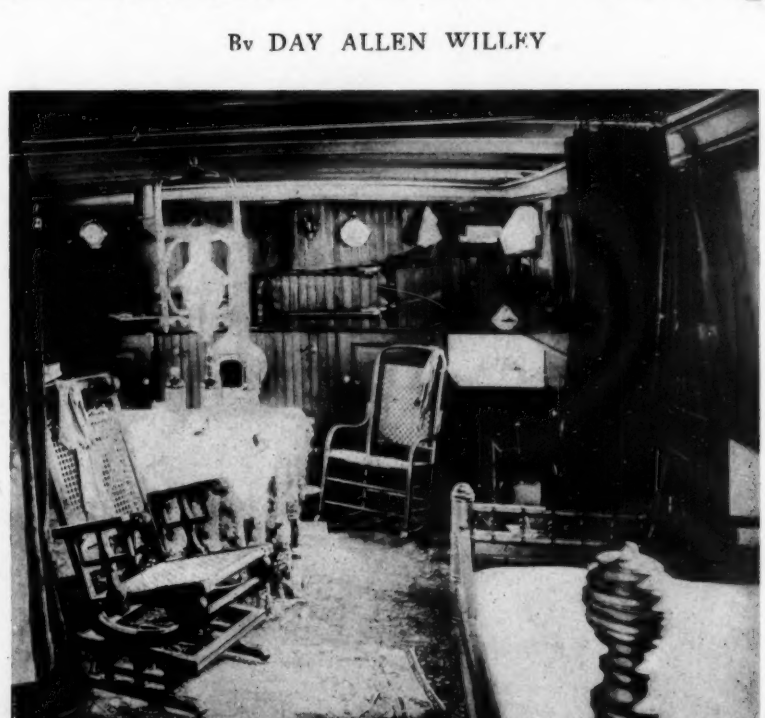
"Let the dinghy go," urged the careful Big Sister, not from ignorance, but from experience of the difficulty of catching such wild horses. "No, one more shot," we determined. "Bring home your dinghy or come home in it." So we ploughed her to windward again, bore away, and luffed, this time bringing the dinghy on the weather beam. The Old Man, flat in the waterway, hanging on with his toes to the cockpit coaming, and, with these grapplers reinforced and backed by the strong arms of the crew, all twined about his ankles, stabbed with a boathook, missed, stabbed again, and caught the dinghy's sternboard. For a moment there was a wrestle, then he rove a line through the ringbolt in her sternpost, threw two or three half hitches with the slack, and the jollyboat was ours once more. Then he crawled, serpent-wise, out on the mizzen boomkin, rove off a jury sheet, shipped the block and seized it in position, and we were once more

(Continued on page 328.)

Yacht Hunters on the Chesapeake

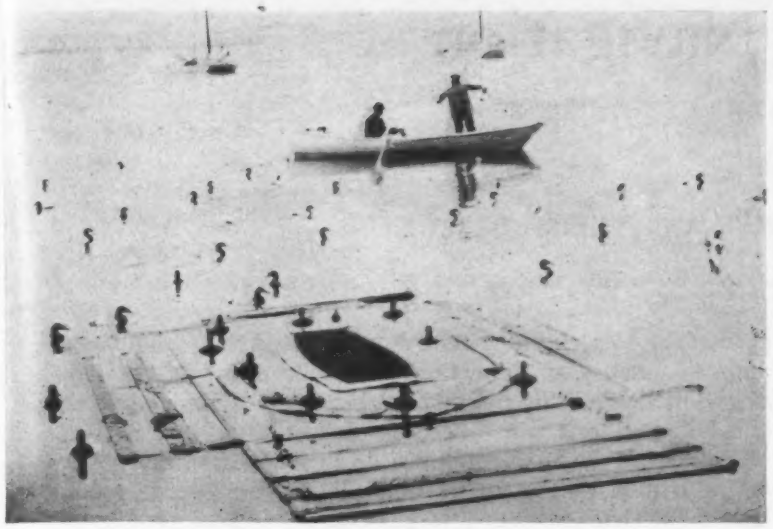
By DAY ALLEN WILLEY

WITH the beginning of November the upper part of Chesapeake Bay becomes the anchorage of a flotilla of sailing and steam yachts which sometimes aggregates half a hundred, each carying its quota of duck hunters. This is probably the greatest hunting ground in America for the sportsman who wishes to get a shot at the canvasback, mallard or coot, and when the dawn of November 1st breaks hundreds of gunners can be counted behind the bars and blinds and in the sink boats, which are arranged all the way from Susquehanna flats to below Carroll's Island. The popularity of these waters seems to be increasing rather than dying out; and in recent years more sportsmen in yachts and motor boats have been coming here, where, as far back as fifty years ago, the old-time hunter with his muzzle-loader winged many a fine bird.



CABIN OF HOUSEBOAT ON CHESAPEAKE BAY USED AS A SHOOTING BOX.

One of the reasons why the Chesapeake is the Mecca for the man with the fowling piece is because of the variety of birds which frequent its bays and inlets during the open season. Not only in the bay itself, but in the creeks and rivers which enter the upper part, are found beds of wild celery and other vegetation, which form extensive feeding grounds. It is also a stopping place for various other game birds which fly southward at the approach of winter, but the principal quarry is the duck. Occasionally a brace of canvasbacks will pass over, although this royal fowl is be-



SETTING DECOYS AROUND A SINK BOAT ON THE SUSQUEHANNA FLATS.

coming very scarce, and a smaller number are bagged each year.

This locality is so convenient to New York, Philadelphia and Baltimore that most of the craft that come to its waters with the beginning of November are from the Northern cities. Among the vessels anchored in the upper bay can be seen steam yachts worth anywhere from $50,000 to $200,000, some of them large enough to carry their owners around the world; and aboard each is usually a jolly party who have come from the metropolis or the Quaker City to put in a week or two with the ducks. These millionaire sportsmen include some of the crack shots of the country, and carry as many guns with them as the fisherman carries tackle. Then there are the hunters who come by the railroad and put up at the various clubs or some of the houses on the shores adjacent to the shooting grounds. As the game is so wary, very little shooting is done from the yachts themselves. These for the time become houseboats, moored at some point from where the blinds and decoys can be readily reached by the power tender or the rowboat. They are merely used for eating and sleeping and to entertain the guests who are sure to drop in of an evening and partake of the yachtsman's hospitality. As the rooms at the clubs are usually engaged weeks in advance by the "land lubbers," as the other gunners are dubbed, yachts, motor boats and houseboats are needed to provide living quarters, for there is no hotel worthy of the name anywhere near the "flats."

There are three different kinds of shooting—point shooting, bar shooting and shooting over decoys. On the flats of the Susquehanna River near the head of the Chesapeake duck shooting is done from what are called sink boats—that is, from a boat, or rather a float, with a coffin-shaped box in the centre, where the gunner lies on his back, his head supported, of course, by a pillow, with two light guns across his body, the whole concern being but little above the surface of the water.

The old-timers who have been ducking here for years are so familiar with duck "signs" that they can find a place for setting decoys and placing the sink boat without the aid of a guide. Enough green hunters, however, are tempted to the Susquehanna to keep some of the native baymen busy during the season making enough to live on during the rest of the year. A good guide gets anywhere from a five to a ten-dollar bill each day, to say nothing of the cigars and "nips," especially when his patron has brought down a canvasback or so; but the guides earn their money, for they are not only posted on the habits of the birds, but on the best guns and ammunition to use, while they are also expert boatmen and story-tellers. Some of them are such good entertainers that often they are in the party that assembles in the cabin after the day's sport is over.

A few days after the season has opened the headwaters of Chesapeake Bay and the mouth of the Susquehanna River afford an anchorage for so many different kinds of craft that one can get an idea of how yachting has developed within the last few years. Literally almost every type is represented, from the pinkie, built on the eastern shore of the Chesapeake, to the power yacht and the steam yacht, which are such familiar sights to the visitor on Long Island Sound and at the Maine summer resorts. While the sailing yachts are few compared with the steam and gasolene-driven craft, occasionally an enthusiastic hunter goes around down the coast and up the Chesapeake in his sloop or schooner, as already stated, converting it into a sort of houseboat while he is enjoying the gunning. Hunters who come from the vicinity use small boats run by a gasolene engine of 10 to 15 horsepower. In fact, a number of these boats have been designed on the Chesapeake especially for ducking. All are constructed with a cabin, and are intended for comfort rather than speed.

Some of the wealthy sportsmen from the North reach the Chesapeake grounds through the inland waterways in regular motor-driven houseboats, which are designed for winter use in the South. After enjoying the shooting season in the boat the owners go on to Florida by way of the inside passage, which leads through the Dismal Swamp and the Sounds of the Carolinas and Georgia.

The "pinkie" or "sharpie" which has been referred to is purely a home product. These boats are built principally in the towns of Eastern Maryland, and are noted for their speed as well as staunchness. In model they are similar to the old-time whaleboat, and some are clinker built—having the strips of planks overlapping each other. The pinkies make excellent auxiliary yachts, and most of them that have been launched within the last two or three years have been equipped with motors.

Occasionally one sees an auxiliary yacht in which the sail power is assisted by a small gasolene engine. For those who like sailing these boats are well adapted for duck shooting, and are kept in commission until well into November on the Chesapeake. More and more, however, the gasolene cruiser is replacing the other boats for shooting purposes. In fact, this is the ideal type of boat for gunning on the water both on account of its handiness, its light draught and the ease with which it may be run. A gasolene cruiser on the Chesapeake places the ducking grounds within easy reach of the principal cities, such as Baltimore, Annapolis and Washington. A few hours' run from these cities will bring sportsmen to the locality where ducks are most likely to be found, and at the same time provide comfortable quarters in which to sleep and live. A duck boat or sneak box bay be either towed or carried on deck to provide means of transit between the boat and the marshes and shallow water where the ducks feed. Power tenders are also much in use, and are a great convenience in getting to and from sink boats and blinds.

A QUARTERING SHOT FROM A SINK BOAT.

Pilot Water Navigation

By COMMANDER C. S. STANWORTH, U. S. Navy

PART III.

COMPASS VARIATION AND DEVIATION AND THEIR CORRECTIONS

[Note.—This is the third of a series of articles on Pilot Water Navigation, or that branch of Navigation that does not require nautical astronomy, or the use of sextant and chronometer.—Editor.]

THE earth is a vast natural magnet, but unfortunately the magnetic poles are not coincident with the earth's poles, nor is the magnetic Equator coincident with the Equator; moreover, the magnetic poles are not fixed in position, but have a slow motion around the earth's surface.

The latest explanation of the directive force of the earth's magnetism on a compass needle regards the earth as an armature instead of a natural loadstone. The sun is constantly emitting streams of negatively-charged ions or corpuscles of electricity, and the earth is revolving on its axis from West to East in a negatively-charged electric field, cutting lines of force. Consequently, electric currents flowing North and South are generated on the earth's surface, just as currents are generated in the armature of a dynamo.

The North Magnetic Pole lies in about Lat. 70 degrees N., Long. 96 degrees W., and as the compass needle points to magnetic North, it is displaced to the left or right of true North, accordingly as our position is to the eastward or westward of the circle passing through the magnetic poles.

Variation.

This angular displacement of the compass needle from true North is called the variation, and is noted on all charts. The variation is nearly constant at any given place, and the annual change, due to the slow motion of the magnetic poles, is given on the charts.

On our coast charts the compass rose is placed with the North-South line in the magnetic meridian, and if the navigator refers his courses and bearings to the nearest compass rose, variation need not trouble him. On general ocean charts, however, the compass roses are true; that is, the North-South line is true North, and dotted curves are drawn on the chart giving the variation for each change of a degree. Consequently, the navigator must apply the variation found on the chart to his magnetic course to find his true course to lay off on the chart.

When the compass needle is pulled to the right of true North, the variation is called Easterly, and marked plus; if the needle is pulled to the left of true North, the variation is Westerly and marked minus.

The lines of force of the earth's magnetism are only horizontal at the magnetic equator, and dip down as we near the magnetic poles, finally becoming vertical. As the compass needle is constrained to move in the horizontal plane, only the horizontal component of the earth's force is of value in directing the needle, and at the magnetic poles a compass needle on shore will revolve freely.

Deviation.

The most important error to the navigator is that error arising from the attraction of the iron on board ship, and differs on each ship. This is called deviation.

We know that if a piece of iron is brought near a magnet or compass it becomes temporarily magnetized and attracts the compass needle and will attract small pieces of iron. When removed from the vicinity of a magnet, this magnetism is soon lost. If, however, the iron or steel is twisted or subjected to blows while temporarily magnetized, the induced magnetism becomes more permanent, the length of time it will remain magnetic depending upon the quality of the metal, whether hard or soft. A steel bar can be magnetized by simply bringing it in the magnetic meridian and hammering it.

In the process of building, a ship lies on the stocks for a long while, with her head in the same direction, and every piece of iron or steel that enters into her making is subjected to violent hammering. Consequently a sub-permanent magnetism is induced in the hard metal parts. Immediately after launching, the ship is placed with her head in the opposite direction, so that the subsequent hammering may serve to neutralize this sub-permanent magnetism. A large portion of this magnetism does disappear, but sufficient remains to allow us, by an analysis of a ship's deviation table, to determine how she was heading while being built.

In addition to the sub-permanent magnetism of the ship's hard iron, the compass on board ship is influenced by transient magnetism, induced, first, in the vertical soft iron of the ship by the vertical component of the earth's force; and, second, by the transient magnetism induced in the horizontal soft iron of the ship by the action of the horizontal component of the earth's force.

The earth's magnetic force tends to restrain the compass needle in the magnetic meridian, while the resultant of the three parts of the ship's magnetism, when without the plane of the magnetic meridian, tends to pull the compass needle away, and the amount of the deflection is the deviation. Investigation of deviation has developed the fact that it is made up of three parts—known as semi-circular, quadrantal, and constant.

Semi-circular deviation is due to the combined influence exerted in the horizontal plane of the magnetism of the hard iron of the ship and the magnetism induced in the soft iron of the ship by the vertical component of the earth's force, and we may consider the resultant of these two forces as combined in a single pole. This is called semi-circular, because on two opposite headings of the ship the pull of the ship's magnetism is exerted in line with the earth's pull, either increasing or decreasing it, and does not cause any deflection. These zero points of semi-circular deviation correspond closely to the line of the ship's keel when building. As the ship's head turns in azimuth or circle, this pull on the North point of the needle will first be to the right, causing Easterly deviation, and, in the other semi-circle, to the left, causing Westerly deviation.

Now, the sub-permanent magnetism of the ship remains constant in all latitudes, but the opposing directing force on the compass, that due to the horizontal component of the earth's magnetism, becomes smaller as we near the magnetic poles; consequently, as the sub-permanent magnetism becomes proportionately greater, its deflective force increases and the semi-circular deviation increases.

Considering the sub-permanent magnetism alone as rendering the ship a huge magnet, with a well-defined North and South pole making a certain angle with the keel, we may neutralize its influence by placing at a suitable distance from the compass a magnet making the same angle with the keel and with its poles in the opposite direction. We thus entirely neutralize that portion of the semi-circular deviation arising from the sub-per-

manent magnetism of the ship. This angle is usually measured around from the bow to the right and is known as the starboard angle.

There remains, however, the semi-circular deviation caused by the magnetism induced in the vertical soft iron of the ship by the vertical component of the earth's force. This also changes with the latitude, becoming zero at the magnetic equator. Consequently, after correcting our semi-circular deviation with the magnet, we may expect changes in it with changes in our latitude, and must recorrect. By swinging ship and obtaining a table of compass errors in two widely differing latitudes, we can separate the two parts of semi-circular deviation, and correct for each separately.

Quadrantal deviation is that caused by induction in the horizontal soft iron of the ship by the horizontal component of the earth's force, the same that gives direction to the compass needle; consequently its proportionate effect on the needle remains the same in all latitudes. The greater portion of it is caused by the action of soft iron placed symmetrical to the compass, and it may be represented by four soft-iron masses placed forward and aft, to starboard and port of the compass. You see by the figure that with the ship headed North the fore and aft masses cause no deviation, while the iron masses in the athwartship line attract both ends of the needle alike, and also cause no deflection. The same occurs with the ship's head on the other cardinal points. With the ship's head Northwest (Fig. 2), the deflection becomes a maximum. Therefore we have the quadrantal deviation becoming zero at each cardinal point, and a maximum in each quadrant, hence its name.

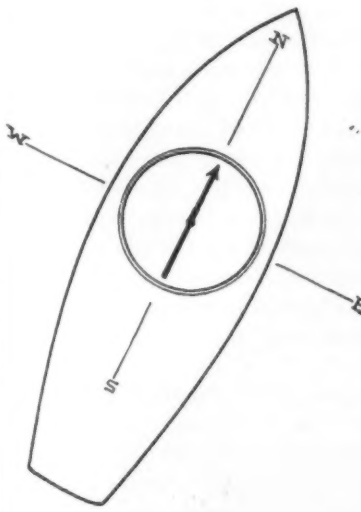


FIG. 1.

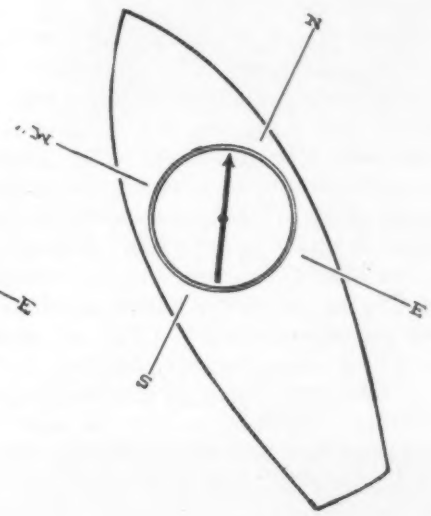


FIG. 2.

Quadrantal deviation is corrected by iron masses, generally hollow iron spheres placed in the athwartship line, with their centers on the same plane as the compass needle, and at such distance as to neutralize the effect of the ship's horizontal soft iron. As the correcting effect of these spheres, like the directive force of the earth, and the disturbing quadrantal force, all vary in the same proportion, quadrantal correction, once made, remains constant for changes of latitude.

The effect of the unsymmetrical soft iron of the ship is generally very small, except in the case of a compass placed off the midship line, and becomes a maximum at the cardinal point.

Unsymmetrical iron is rarely corrected, but may be by placing the iron spheres slightly off the athwartship line.

Constant Deviation.—Another effect of the unsymmetrical iron is to cause a constant error that remains the same on all courses. This is generally very small unless caused by improper placing of the compass, throwing the lubber's line off the fore and aft line. It may be found by adding the deviations on a number of equidistant points together, calling Easterly deviations plus, Westerly deviations minus, and dividing the algebraic sum by the number of points used.

Heeling Error.—Hitherto we have considered the ship on an even keel, and the vertical component of the sub-permanent magnetism of the ship and the vertical component of the induced magnetism in vertical soft iron tend to pull the compass needle down, but do not cause any deflection. When the ship is heeled, however, these forces exert a side pull and cause deflection. Also, the horizontal soft iron of the ship now becomes inclined, and the vertical component of the earth's force now induces a new magnetism in it.

The heeling error is corrected by a vertical magnet placed under the center of the compass needle at a suitable distance. This does not affect the ship when on an even keel, but, when she is heeled, it is thrown out of the vertical in the same proportion as the disturbing force that causes heeling error, and tends to neutralize it.

SELECTION OF COMPASS SITE.

Having an appreciation of the causes that produce compass errors, we can proceed to select the place for our compass. On account of the quadrantal deviation, we will locate our compass on the midship line, avoiding undue proximity to large masses of iron. On large ships one compass is always so located, known as the standard compass, and generally it is placed in an elevated position and giving as wide a view of the horizon as possible, so that compass bearings can be taken directly. Other compasses are placed near the steering wheel. and the course having been set by standard compass and the ship steadied upon it, the corresponding course is steered by the steering compass, being frequently checked by the deck officer. On yachts, however, the compass must be so placed as to be visible by the helmsman.

Having determined the site, the fore and aft line must be carefully determined, and if the compass is mounted on a binnacle stand, the stand is placed in position, adjusted until the lubber's point is in line with the keel, and the binnacle secured. If our compass is a portable one and placed on deck, the fore and aft line should be permanently marked, so that the compass lubber point can always be placed correctly. Having due regard to the helmsman, we should also place our compass so as to allow of bearings being taken directly.

PELORUS.

The Pelorus is a dumb (*i. e.*, having no magnet) compass card, fitted with sight vanes and mounted so that it can be set to any desired heading of the ship, and so placed as to give a view around the horizon. On large ships we find a pelorus on the ends of the navigating bridge, and since it has no magnetic qualities, we may consult our convenience in placing it. Obviously, if we set the pelorus to the same ship's heading as the standard compass, the line of sight through the sight vanes will give the compass bearing of any object.

We can accomplish the same object on yachts in a simple way. On top of the cabin, or some other convenient place, describe a circle, and mark where the fore and aft line crosses it. Now graduate your circle from the fore and aft marks either to degrees or points, and, if you wish, mount a revolving arm with sight vanes. By sighting across this circle at any object, you can determine the number of points to the right or left of the fore and aft line it bears, and if we note the ship's head at that time a simple calculation gives the compass bearing of the object.

COMPASS DEVIATIONS.

With most of our sailing yachts built of wood, compass deviations will probably be small and less than errors of steering or

errors in reckoning leeway. But on motor boats, with engine aft and fuel tank forward, it may be difficult to find a compass site that is not close to disturbing masses of iron. Moreover, motor boats are always steered on a course, while sailing boats are often by the wind; so compass deviations, even when small, are of importance on motor boats. So having determined your deviations, if you cannot compensate your compass, make out a table giving the deviation on each point, marking Easterly deviations plus, Westerly deviations minus, and keep it handy for reference—as in the compass box. Now if you wish to steer North (magnetic) look at your table. If you find the deviation for ship's head North is one quarter of a point Easterly, your course by compass is North one-quarter West. If your deviations are very large, say two points Easterly, your course becomes North-North-West, and the deviation on that heading of the ship, which is probably different from when heading North, should be used.

How to Determine Deviations.

There are four methods used for determining compass deviation—reciprocal bearings, ranges, bearings of a distant object and bearings of the sun.

Reciprocal Bearings.—Send a compass ashore, and set it up in some convenient place free from local attraction. To test this set up three marks about 20 feet from the compass in a triangle. Set compass on each of these marks, and observe the bearing of the other two marks. The respective bearings of *A* from *B*, *B* from *A*, should differ by 180 degrees, if there is no local attraction.

Arrange with the observer on shore some simple flag signal to indicate when observations are to be taken. Now swing ship by steaming in a circle, or if at anchor by springs and hawsers, or get a motor boat to tow you around. Steady ship on each heading (every other point is sufficient) for 4 minutes, signal shore observer, and take bearing of shore compass, the observer ashore at the signal taking the bearing of the ship's compass. His bearings reversed give his correct magnetic bearing from the ship, and the difference between this bearing and that given by the ship compass gives the compass deviation on each heading.

Ranges.—Take some definite range whose magnetic bearing you may take from the chart, and steam or sail across the range on different headings, giving your compass 4 minutes to steady, and as you cross the range observe its compass bearing and compare its bearing by the chart.

Bearings of a Distant Object.—If we have an object so distant that its bearing will not appreciably change while swinging ship, we can take its compass bearing on the required number of points as the ship swings around. Its magnetic bearing may be taken from the chart, or the average compass bearing on a number of equidistant points may be taken as the correct magnetic bearing (this assumes that your constant error is small).

Bearings of the Sun or Sun Azimuths.—On large ships the azimuth circle is used with the standard compass, but a simple method for observing the bearings of the sun with a compass whose level is assured by being mounted in freely swinging gimballs is as follows:

Set a long brass screw with flat head over the center of the compass and observe the bearing of its shadow—this bearing reversed is the bearing of the sun. If you wish to use your dumb compass marked on the cabin top, take the shadow of a plumb line over the center.

When the sun is on the prime vertical, or bears nearly East or West, its bearing changes very slowly, and mistakes in time will not cause great errors; consequently, if you are going to use sun azimuths (or bearings), the observations should be taken early in the morning or late in the afternoon.

Prepare beforehand your notebook by ruling columns for ship's head, watch time, local apparent time, true bearing of the sun, observed bearing, compass error, variation, deviation. To find the local apparent time, assuming your watch is set correctly to local standard time, apply the difference in longitude between your position and the standard meridian, adding it to standard time if you are East of the standard meridian, and *vice versa*. For instance, your longitude is 76 degrees 15 minutes West, or 1 degree 15 minutes West of the 75th meridian. This reduced to time is 5 minutes (there is 4 minutes to a degree, or an hour to 15 degrees), and since you are West you must subtract 5 minutes from standard time to get local mean time.

Our time is measured by the apparent motion of the sun, but since this apparent motion is in a plane called the Ecliptic, inclined to the Equator, and, moreover, since the apparent motion of the sun is not uniform in the plane, being accelerated in the winter, retarded in the summer, according as the earth is nearer or farther from the sun, astronomers measure time from a fictitious sun whose motion is uniform, called the mean or average sun. In the Nautical Almanac (also Tide Tables), Table 6, the difference of time between the apparent sun and mean sun is given for each day of the year, and is called the equation of time. So look in the Nautical Almanac for the equation of time and apply it to our local mean time, adding or subtracting as indicated in the almanac, and we have local apparent time.

Now swing ship, steadying on as many points as desired, and observe the bearing of the sun, noting the watch time.

Correct the watch time, writing down the local apparent time for each observation. Referring now to the Azimuth Tables we find for each day of the year opposite the local apparent time the true bearing of the sun is given. Enter these opposite your local apparent times.

The difference between the observed and the true bearing of the sun gives us our total compass error for each heading of the ship, so put these down in the compass error column, marking the error plus if the true bearing is to the right of the compass bearing, minus if to the left. This column is the deviation plus the local variation, so subtract the variation, marking Easterly variation plus, Westerly variation minus, and the result is the compass deviation on the ship's headings on which the observations were taken. Having our deviations on every other point, or nearly so, we can construct a curve that will give the deviations on the other points, and this will also show any material error in one of the observations.

Make out a table giving the compass deviations on each point, and keep it handy, so as to be able to apply the difference immediately to any course we may wish to steer.

If you are fortunate enough to possess a compass with a compensating binnacle, you can now proceed to compensate it, reducing the deviations to a maximum of 2 degrees.

Compensating Binnacles.

Compensating binnacles have two athwartship arms for carrying the iron spheres for correcting the quadrantal deviation. For correcting the semi-circular deviation, underneath the compass are two trays working on a vertical rack and pinion, so that the distance from the compass can be regulated. One of these trays carries pairs of magnets placed athwartship, the other pairs of magnets placed fore and aft. Or you may find a single tray carrying magnets so fitted that it can be revolved, as well as raised or lowered. These magnets are fitted in pairs so as to clear a central tube in which is placed a vertical magnet for correcting the heeling error.

As compensation of the compass is rather a complicated matter to those unfamiliar with the use of the compass, it will be treated by itself in a later instalment of this series.

(To be continued.)

Timandra

THE new racer Timandra, which our frontispiece illustrates, is from the board of Designer George Owen, of Newton, Mass. She rates just under 31 feet, and races, therefore, in Class P of the rating rule. She was built by Hodgdon Bros., of East Boothbay, Maine, last spring for Mr. John B. Fallon, Jr., of Boston. Her design is a splendid example of the combination of speed and comfort that can be produced in a boat of this class under the present rating rule.

During the racing season just closed Timandra started in some twenty-two matches. As a result, she won the championship of the Eastern Yacht Club, the championship of the Corinthian Yacht Club, the championship of the Boston Yacht Club, the Corinthian mid-summer series, this season's leg for the Lipton Cup for her class, and the Isles of Shoals long-distance race, the last named being sailed in a smashing sou'wester.

In addition to her qualities as a successful racer, Timandra's cruising accommodations are far superior to most yachts of her size, whether racers or cruisers. There is a commodious double stateroom aft, fitted with two berths 30 inches in width. Large drawers are under these berths, and provision is made in this room for the stowage of suit cases and grips—generally a nuisance on a small yacht. Abundant light and ventilation in this stateroom are secured by means of port lights in a small cabin house, beneath which is full 6 feet of headroom.

Forward of the stateroom is the main cabin, with a wide transom settee and back on each side. These transoms are arranged to extend, thus providing comfortable berths 30 inches wide. On the starboard side, above and back of the transom, is a large closet for clothing, also a large chart case. On the port side are closets for china and an alcove for glasses and decanters.

Forward of the main cabin, on the starboard side, is the toilet room. This is fitted with necessary plumbing and a folding lavatory. This room also contains a large closet for the storage of oilskins, etc.

The stateroom, main cabin and toilet room are finished in white enamel and mahogany. The cushions, of Ostermoor, are covered with dark green art velvet, the whole presenting a very handsome appearance.

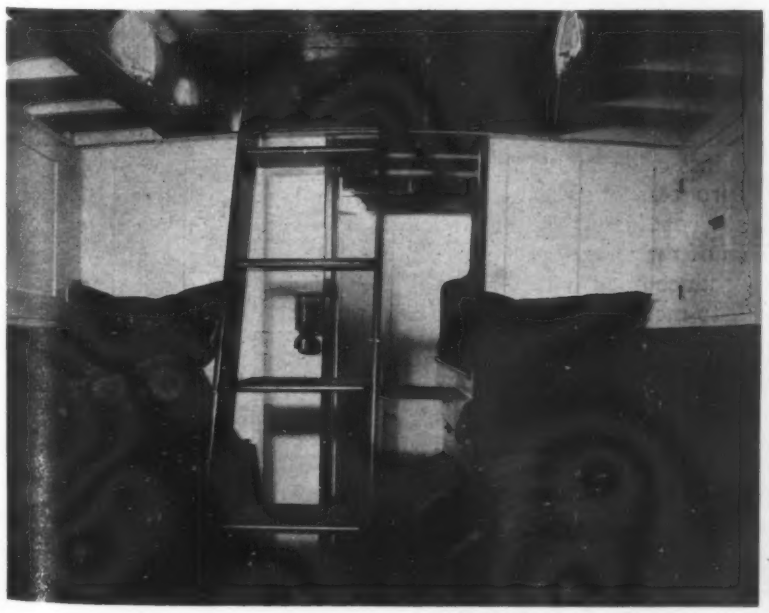
DECK VIEW OF TIMANDRA, LOOKING AFT.

Forward of main cabin, on port side, is the galley, fitted with a two-burner alcohol stove, dish lockers, fresh-water pump, etc.

The main cabin, toilet room and galley are lighted and ventilated by port lights in a large cabin house, beneath which there is full 6 feet of headroom. Further forward is the forecastle, with pipe berths and large ice box. The spaces in the long bow and the lazarette aft are utilized for the stowage of all spare sails and gear. A fresh-water tank of 50 gallons capacity is located aft under the cockpit.

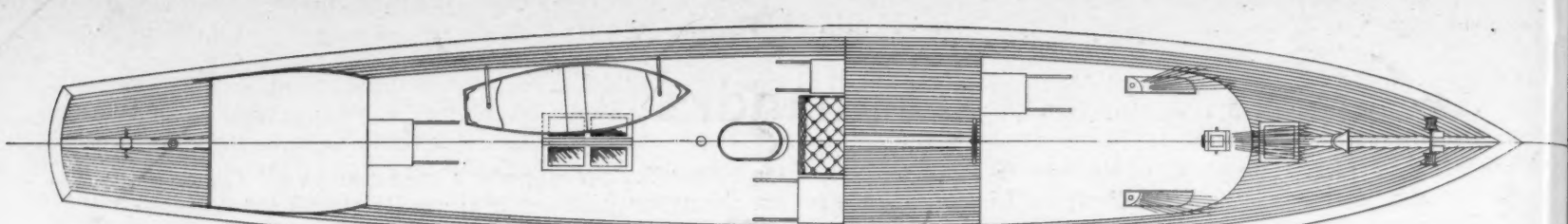
Timandra was never "stripped" for racing. She sailed every match with her full cruising outfit aboard — certainly a comfort in a racing boat, and a big step in the right direction.

After a season of as hard driving as any racing yacht has probably ever received, she has retained her shape perfectly, and her smooth, bottle-like sides testify to the art and integrity of her builders. The following are the general dimensions of the boat: Length over all, 49 feet; waterline, 30 feet 10 inches; extreme beam, 9 feet 6 inches; draft, 6 feet 10 inches.



LOOKING AFT INTO STATEROOM.

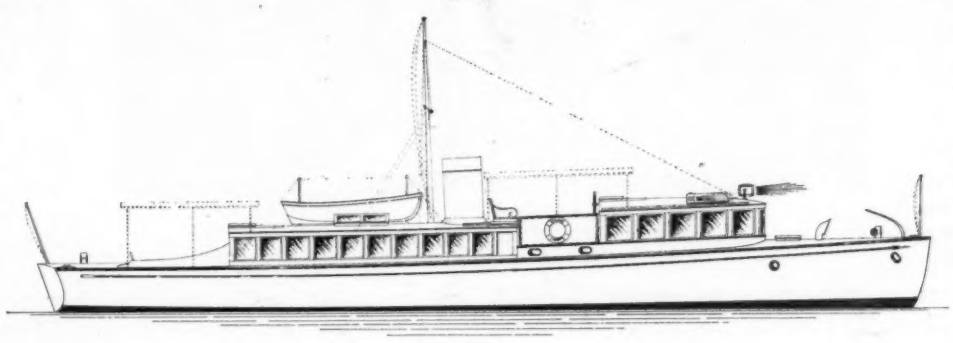
MAIN CABIN, LOOKING FORWARD.



A 65-Foot Inland Cruiser

AMONG the new cruisers designed for next year's service is the 65-footer illustrated herewith and designed by Morris M. Whitaker, of New York, for Dr. Wm. H. Field, of Evansville, Ind. This boat is intended for use on Western rivers, with a possibility of a trip to the Gulf. As so much of her cruising is to be done against river currents, considerable speed was one of the requirements. The breadth has, therefore, been kept down and liberal power in the shape of an 80-horsepower special 6-cylinder, 4-cycle engine will be installed. This power plant is expected to give her a speed of 14 miles per hour, with the engine turning up about 400 revolutions per minute.

The form of the hull is such as to make the boat easy in a seaway and speedy, with comparatively economical fuel expenditure. Her tank capacity of 1,000 gallons will give her a cruising radius of 1,000 miles at an average speed of 10 miles per hour. The dimensions of the boat are 65 feet in length over all, 62 feet load waterline, greatest waterline beam 10 feet, and extreme draught 3 feet 6 inches.



As will be noticed, by reference to the outboard profile, she has two glass-sided cabin trunks, with a steering bridge between them and a cockpit aft. Forward and after decks are amply large for convenience in handling anchors and moorings. Both steering bridge and cockpit are shaded by removable awnings on iron stanchions. She has a military mast, a dummy stack and carries a 12-foot tender on the port side of the after-cabin roof.

The crew's quarters, 12 feet in length, are forward and separated by a water-tight bulkhead from the forward saloon, which also serves as the owner's stateroom, being fitted with extension transoms and a desk. This room is 12 feet long. Companionway and steps on the port side lead from the after end of the forward cabin to the bridge deck, where steering wheel and engine controls are concentrated. The engine room occupies space under the bridge deck, 7 feet in length, and it is so arranged as to be ventilated by the dummy stack, and through ventilating trunk in after end of forward house by a fan connected to motor.

Aft of the engine room on the port side is a bath room 6 feet in length, and on the starboard side is a passageway, with stairs at the forward end leading to the bridge deck. Entrance to the engine room is by means of a companionway and ladder on the port side of the forward end of the after-cabin trunk. The passageway just mentioned leads aft to a 10-foot saloon, in which will be a double, folding davenport, china and glass closets, and a liberal amount of storage space in the form of lockers. There is also a folding bed on the port side of the saloon.

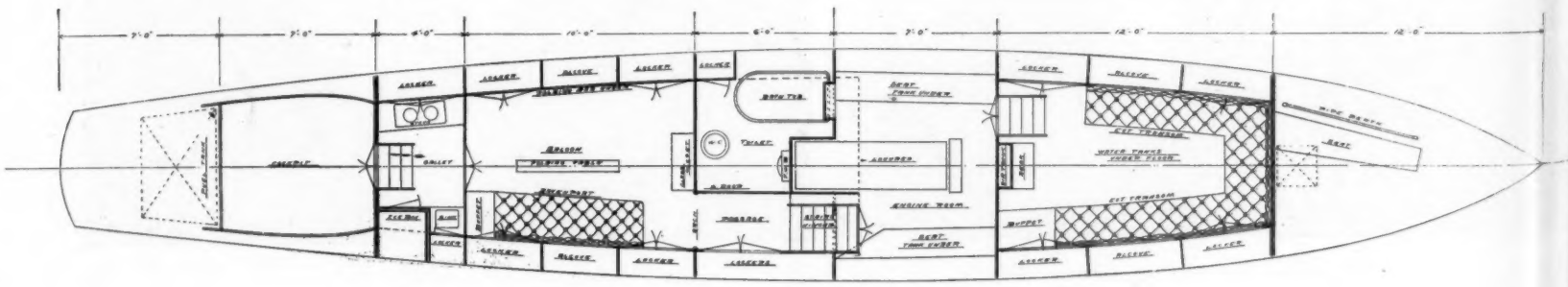
The after compartment in the boat is the galley, 4 feet in depth and running across the full width, with a two-burner stove on the port and ice box, sink and locker on the starboard side. Steps and a companionway lead from the galley to the after cockpit. This cockpit is covered by an awning on stanchions and on account of its convenience to the galley it may be used as a fair-weather dining room.

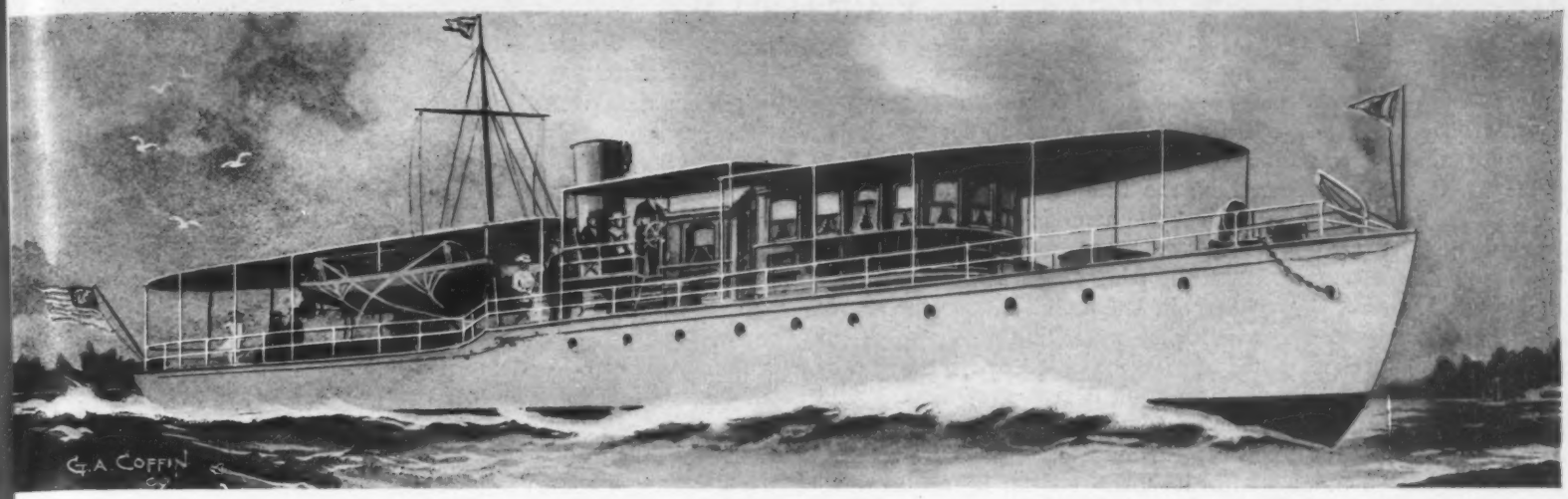
In addition to the fuel tanks at each side of the engine room, an additional one is under the after deck. The high cabin trunks, which by swinging up the plate-glass windows may be converted into what are practically a standing roof awning, should make her a very cool and pleasant boat for inland navigation.

The plans of this boat show how well this type combines the good points of the older model glass-cabin launches with the advantages of a long turtle deck forward, 'midship bridge, steering and observation deck and sheltered cockpit aft. Moreover, the break in the cabin trunks and the addition of the dummy stack gives her a shipshape appearance that the straight, unbroken, high glass-sided cabin style of architecture sadly lacks.

The manner in which the crew and engineer are separated from owner and guests, and the ease by which they may gain those portions of the deck necessary for handling of boat and anchors without passing through staterooms shows, by comparison with the glass-cabin boats of similar dimensions of but a few years ago, the progress which has been made in the layout of cabin plans.

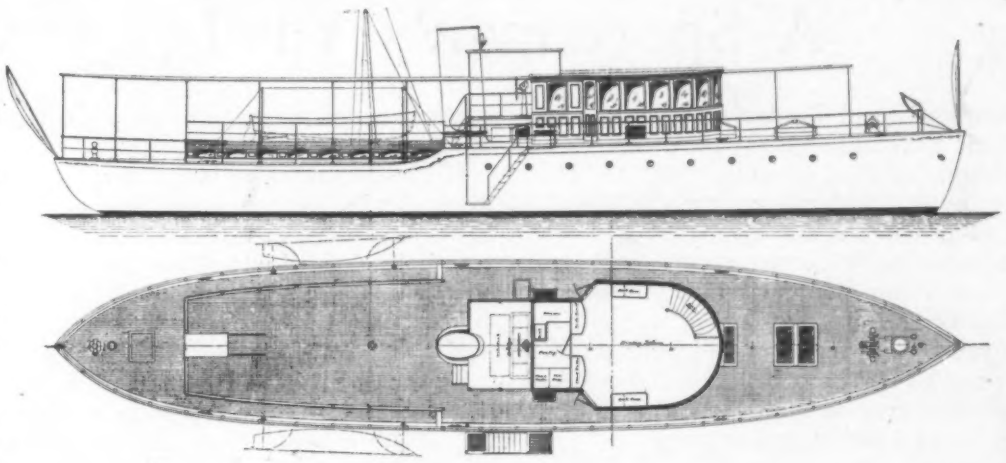
The boat is narrow for her length, the beam being less than one-sixth of the waterline length; but the hull has been well designed to produce good weatherly qualities under the conditions she was built to meet, and all available room is made use of.





A 90-Foot Gasolene Yacht

TEKLA II, designed by Messrs. Cox & Stevens, New York City, for Mr. Alessandro Fabbri, of New York, bears, in outward appearance, a strong resemblance to the 83-footer designed by them for Mr. Hobart J. Park and illustrated in last month's YACHTING. She has the same forward raised deck, deck house and after cabin trunk with side decks, also the dummy stack, the after end of which is flush with the break in the deck. There is the same canoe stern and slightly raking bow, but below decks her arrangement in many ways is quite the reverse of the smaller boat.

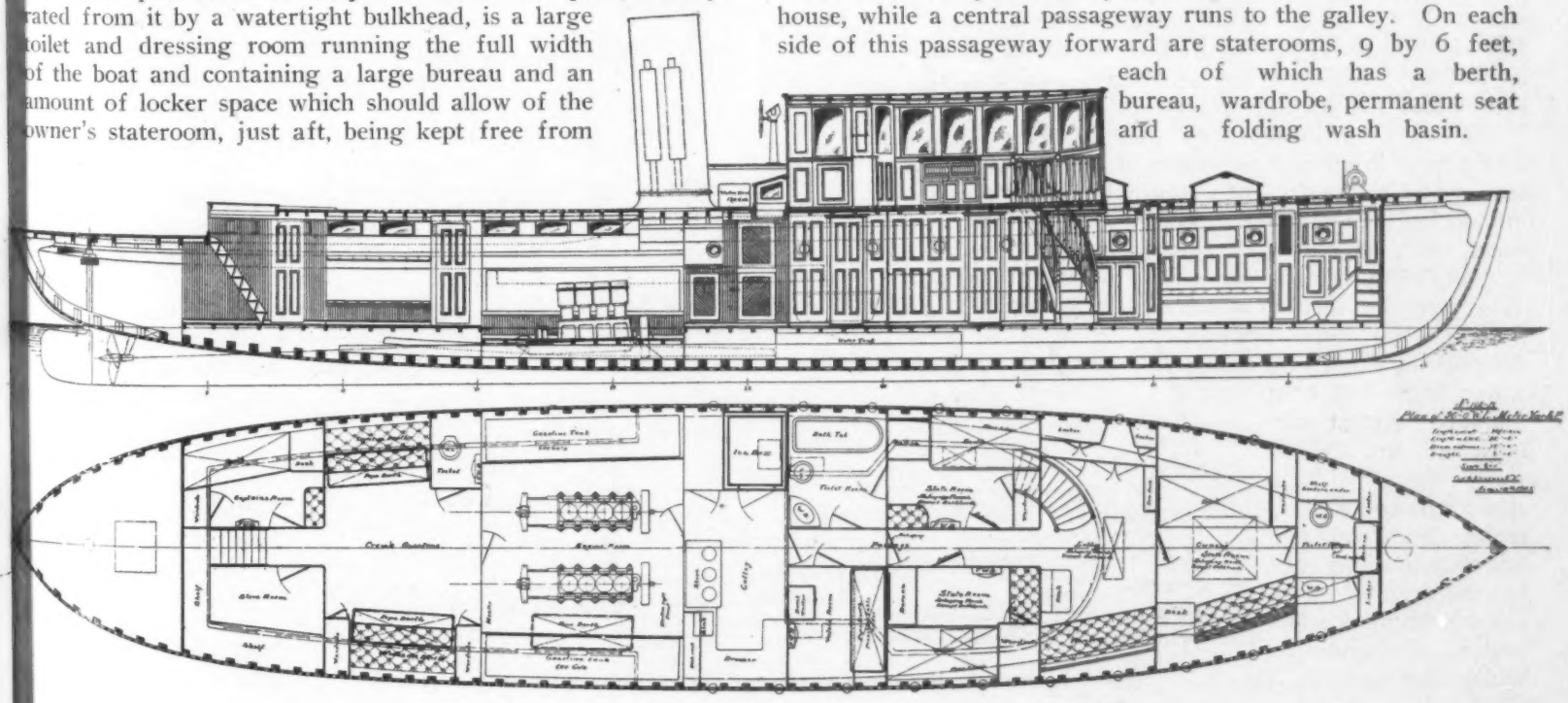


For instance, although she carries her engine room amidships, the owner's quarters are forward and the crew's quarters in the after part of the boat. Just aft of the forepeak, and separated from it by a watertight bulkhead, is a large toilet and dressing room running the full width of the boat and containing a large bureau and an amount of locker space which should allow of the owner's stateroom, just aft, being kept free from that congested appearance which most cabins have on a long cruise.

This owner's cabin, which is 8 feet 3 inches in length, also extends across the full width of the boat, and has a bed on the port side and a transom seat and a writing desk on the starboard side. It is lighted and ventilated by two 7-inch port holes on each side and a large skylight.

Aft of the owner's stateroom is a lobby 7 feet in length, with lockers on the port and a transom, which may be converted into a berth, on the starboard side. A writing desk is placed against the after bulkhead and a good-sized gun rack against the forward one, as it is intended to use the yacht for shooting expeditions.

From this lobby a stairway on the port side leads to the deck house, while a central passageway runs to the galley. On each side of this passageway forward are staterooms, 9 by 6 feet, each of which has a berth, bureau, wardrobe, permanent seat and a folding wash basin.



Aft of the port stateroom is a good-sized bathroom, which is entered both from the passageway and the stateroom, while on the starboard side is a room with pipe berth, under which is a pressing table and a folding wash basin.

Aft of all these is the galley, the full width of the boat, with stove, sink and dish rack against the after bulkhead, a large ice box on the port side and dresser on the starboard side. A dumb waiter connects the galley with the pantry on deck. Next to the galley, and entered by a door in the bulkhead, is the engine room, containing two 4-cylinder, 4-cycle, 60-horsepower Craig engines, which are calculated to give the boat a speed of 12 miles per hour. A 600-gallon gasolene tank is stowed along each side of the engine room, giving the boat a cruising radius of 900 miles at her normal speed without replenishing.

The engine room also affords space for an unusually large electric light plant capable of lighting the vessel, including a searchlight, and working a wireless telegraph system. There is a pipe berth for the engineer on the starboard side of this compartment.

The crew's quarters consist of a cabin 9 feet 3 inches in length, with one transom and one pipe berth on each side, and contains a separate toilet and two good-sized wardrobes. A heater will be installed in this room that will connect with hot-water radiators in all the owner's quarters.

A passage leads from the crew's quarters to the companionway which gives access to the after deck, and on the port side of this passage is the captain's room, with berth, wardrobe, folding wash basin, desk and seat, while on the port side is a large storeroom with shelves.

The deck house contains the dining saloon and butler's pantry, aft of which is the raised bridge deck, with a gravity water tank of 120 gallons capacity underneath to supply wash basins with running water. Water tanks of 800 gallons capacity are located under the floor in owner's quarters.

The dimensions of this boat are as follows:

Length over all, 90 feet; length on load waterline, 82 feet; extreme beam, 17 feet; draught, 3 feet 6 inches.

The boat will be fitted with a wireless telegraph system. The deck house, inside and out, rail and plankshеer will be of mahogany, while owner's quarters below will be finished in white mahogany trim.

Mr. Fabbri is an enthusiastic sportsman, and will use the new Tekla in Southern waters in the winter, spending his summers at Bar Harbor, where the boat will be in constant use.

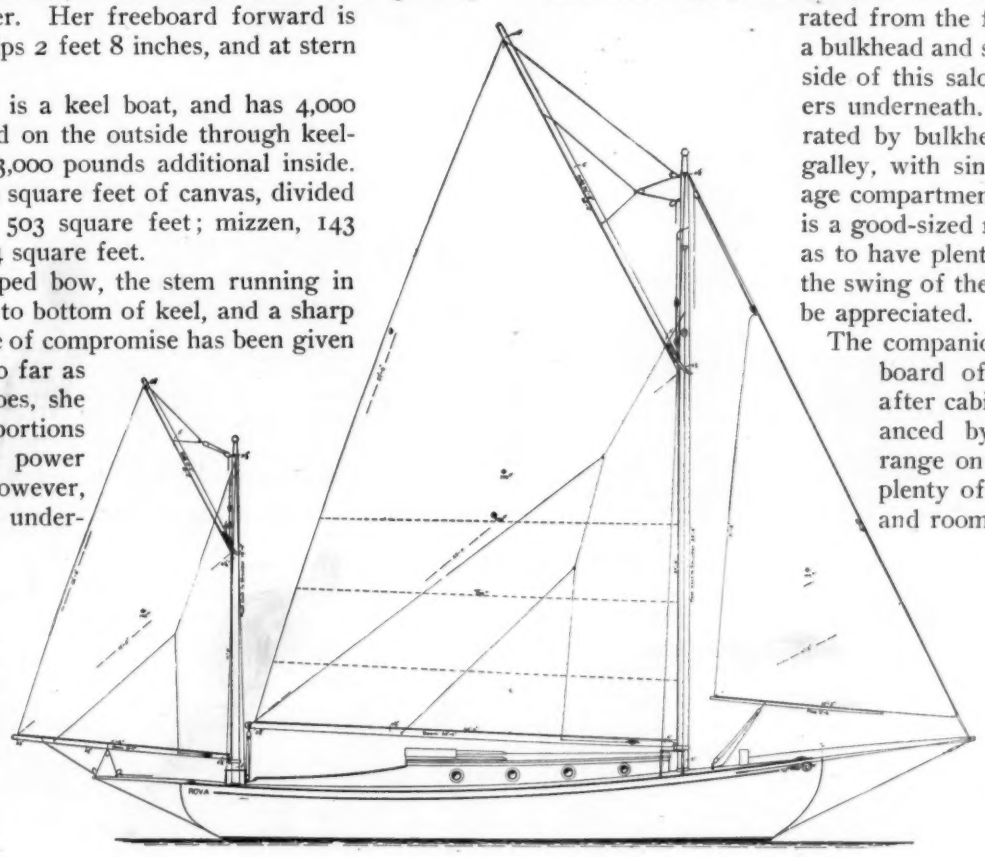
A Sportsman's Yawl

THE 35-foot, double-ended yawl illustrated herewith was designed by Frederic S. Nock, of East Greenwich, R. I., for Mr. T. A. Briggs, of East Greenwich, R. I. This boat is such a snug, seaworthy and thoroughly comfortable craft, and is so well adapted to all-around and all-year use for shooting and fishing, that she will undoubtedly interest a very large proportion of our readers, and seems particularly appropriate in this, our Fall Shooting Number.

The dimensions of this yawl are 35 feet over-all length, 29 feet 6 inches on the load waterline, 10 feet extreme beam, and 5 feet 9 inches draught of water. Her freeboard forward is 4 feet 8 inches, amidships 2 feet 8 inches, and at stern 3 feet 1 inch.

As will be seen, she is a keel boat, and has 4,000 pounds of ballast bolted on the outside through keelson, while she carries 3,000 pounds additional inside. Her rig consists of 790 square feet of canvas, divided as follows: Mainsail, 503 square feet; mizzen, 143 square feet, and jib, 144 square feet.

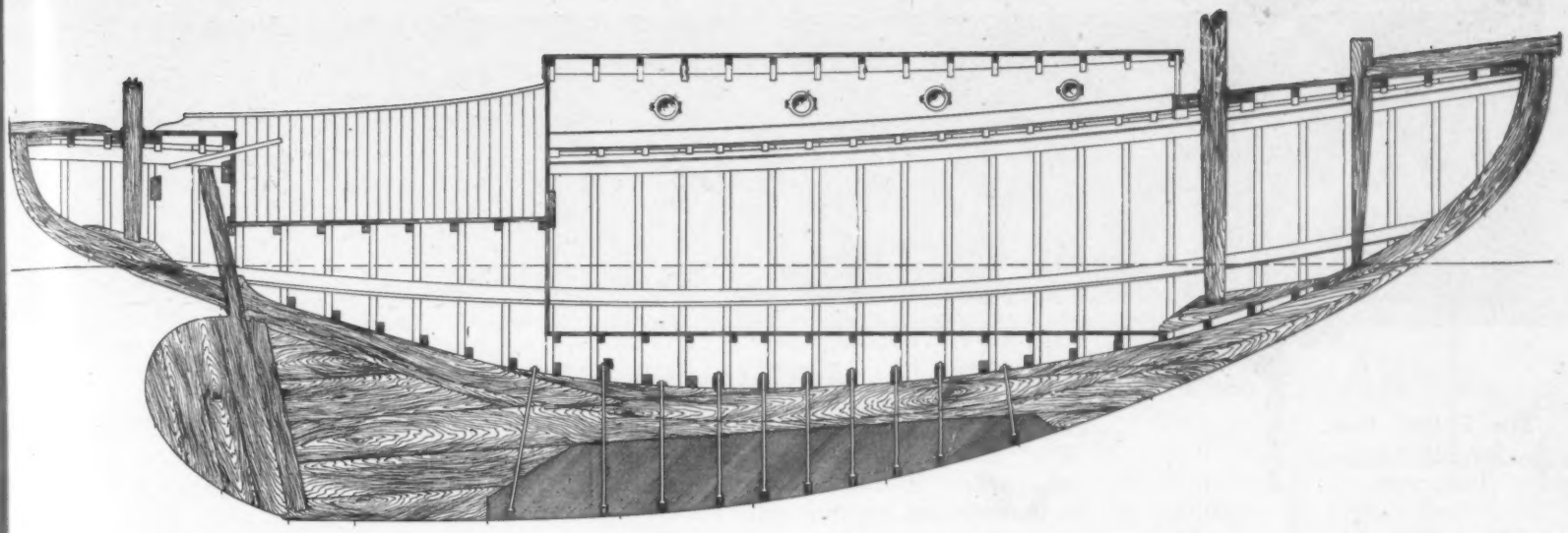
She has a spoon-shaped bow, the stem running in a fair curve from deck to bottom of keel, and a sharp stern, to which the name of compromise has been given in launches. In fact, so far as sheer and deck plan goes, she has very much the proportions of a compromise-stern power boat. Her lines, however, demonstrate how the underwater body has been modified to meet sailing conditions. She is fairly deep, with a sharp run and considerable deadwood, and has only a slight rake to the rudder post. For downright comfort under all conditions which her use as a sportsman's floating home would entail she has much to commend her.



Her cabin trunk, square at the forward end, is 18 feet in length, and is lighted by three 6-inch and one 5-inch hinged port lights on each side, with two at the forward end. The cabin is practically divided into three compartments. The forward cabin contains a folding pipe berth and toilet appliances, and may serve either as the owner's room or the sleeping compartment for a paid man.

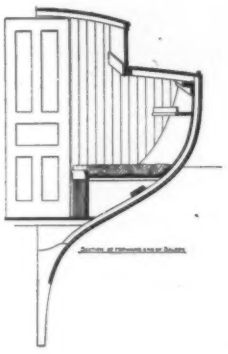
The main cabin, with extension berths on each side, is separated from the forward compartment by a bulkhead and swinging door. On each side of this saloon are berths with lockers underneath. Aft of this, and separated by bulkheads and curtains, is the galley, with sink, dish locker and storage compartment, while on the port side is a good-sized refrigerator, arranged so as to have plenty of clearance space for the swing of the door, a point which will be appreciated.

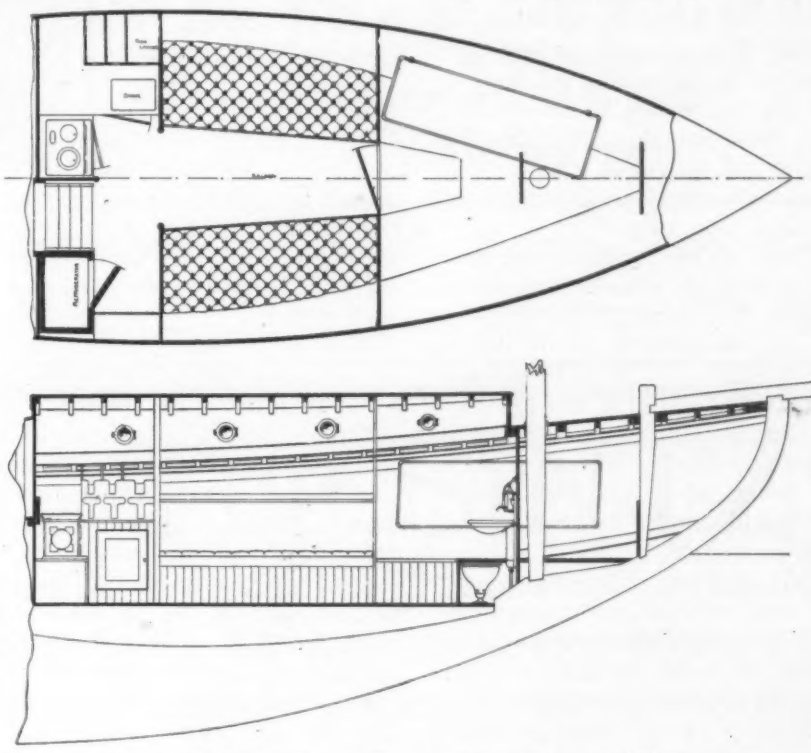
The companion steps are just to starboard of the center line of the after cabin bulkhead, and are balanced by a two-hole Shipmate range on the port side. There is plenty of shelf space on the boat and room for storing any amount of extra gear under the forward deck. Her cockpit is 8 feet in length, and well protected by the high coaming, which slopes down from the full height of the cabin trunk forward to about half that depth aft. The cockpit is square



at the after end, and includes a portion of the after deck, which may be used as a transom seat.

She is not too large to be handled by one man, yet she has ample accommodations for a party of three—her owner, guest and a paid hand. With a boat like this, an owner with a taste for gunning and fishing can keep afloat for nearly the whole year, and do it with



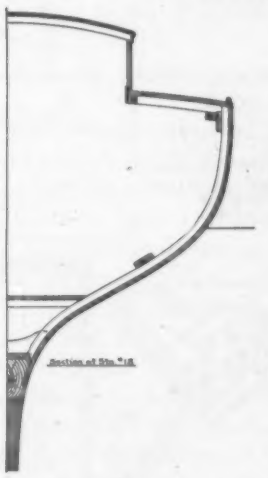


comfort, irrespective of weather conditions.

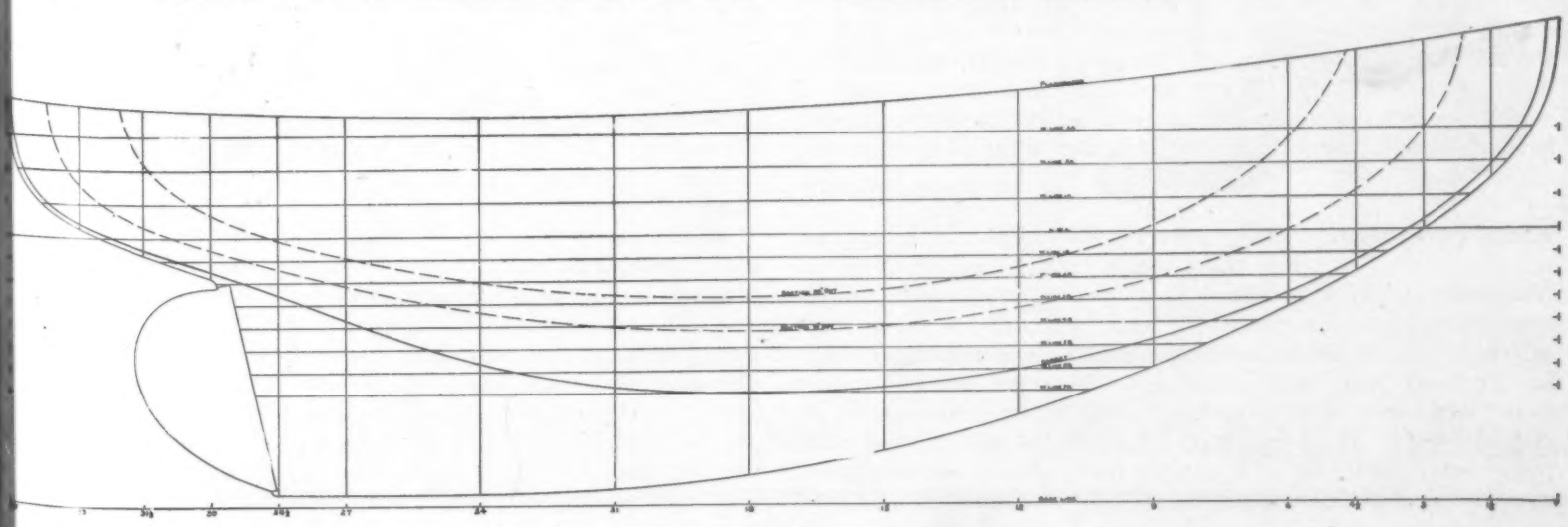
Her full body gives her a very liberal amount of floor space, which makes practically every inch of her cabin available. In fact, the proportion existing between the floor space and the dimensions of her cabin trunk is greater than one usually finds.

As shown in the plans, the boat steers with a wheel; but a tiller may be very easily arranged. Her 6 feet of head room in the cabin has been obtained without undue height to the trunk. The cockpit is self-bailing, and offers stowage space beneath for water tank and supplies, while there is plenty of room for a gun locker on the starboard side between the refrigerator and the cabin bulkhead.

For a cruising boat, capable



of taking anything in the way of weather that comes along, she should prove ideal. There is good sheer and plenty of freeboard, making her dry and comfortable in a seaway. Her rig is of fair size for a boat of her length, and she should be well balanced and easy to handle under all conditions.



EDITORIAL

Published by the Yachting Publishing Co.; Oswald Garrison Villard, President; Herbert L. Stone, Secretary and Treasurer.

The Power Boat for Hunting Purposes.

With the coming of the end of September it is usually considered that the yachting season is over, and it has been the custom to rush yachts into storage and get them under cover for the winter at the first of the crisp autumn breezes, even before the leaves are beginning to color. But with the advent of the motor boat, especially the small cabin cruiser run by the owner himself, power boat men are beginning to find, what a few of the sailing men have already discovered, that October and a part of November, with their clear days, snappy westerlies and the ever-changing foliage of the shore line, are the best parts of the year on the water. The result has been a lengthening of the season until six months may now be counted as not too long a time to be afloat with comfort in these latitudes. This has had the result of placing within reach of the man with a power boat the pleasures of shore bird and duck shooting and hunting along the coast.

The advantages of the motor boat for these purposes are too apparent to need dwelling upon at length. Heretofore waterfowl shooting, for the average man, has meant a rail trip, followed by a long walk or row to some inaccessible point, the collection of a suitable kit, and the putting up with many discomforts in the way of accommodations. With a cabin power cruiser, the most inaccessible shooting grounds are brought within a comparatively few hours of the city, while the boat itself is capable of providing comfortable living quarters, as well as storage for guns, ammunition, decoys and the innumerable items necessary for a successful gunning expedition.

So useful have these boats been found that every year sees an increase in the number designed and built for the express purpose of hunting and fishing. Designers are producing staunch, seaworthy hulls capable of meeting whatever the autumn winds may turn up and interior arrangements suited to the needs of the sportsman. Many of these boats cover our coast and inland waterways from Maine to Florida, following the seasons and trying the game of the different localities. Being of good speed for their size, of light draught and yet seaworthy, they are capable of a wider range of action than any small boat yet produced. Not only are they initiating each year to the pleasure of shooting along shore, even until the spray freezes, many yachtsmen, but, best of all, they are awakening in a large number of sportsmen an inherent love of the sea, which, up to the present, has lain dormant through lack of adequate means of gratification.

Racer vs. Cruiser.

If it were possible to obtain in our racing boats under the prevailing rule of measurement the same speed as at present without sacrificing comfort and accommodations, it would certainly be much more satisfactory, and would assuredly result in a much larger number of boats being built which could be raced successfully by those yachtsmen who have heretofore confined themselves to cruising craft. If our present rule permitted this, it would certainly be an ideal one. Of course, fairly good accommodations may be found in the larger boats; but why not in boats of the P, Q and R classes? Have designers given the rule a fair test in this regard, or have they adhered from habit to the mere shell for racing craft? Can they not turn out a fast boat and still retain those essentials that make for comfort?

An illustration of the possibilities under the rule has recently been brought to light by the performance of the sloop Intrepid against the regular Q class racing boats. Intrepid was built at Marblehead nine years ago under no racing rule, but with the sole object of providing an able, fast and comfortable cruiser; and she is certainly a success in these respects. Nothing was sacrificed in construction or accommodations. She has a large cabin with full head room; a commodious galley, with stove, double ice box and pipe berth forward. In the cabin is a lavatory, buffet and several large clothes lockers, two skylights and a 60-gallon water tank. Surely this is a more useful and desirable type of boat than such racing craft as have been recently turned out for the Q class—Eleanor, Princess, More Joy and the others that have been built recently under the new rule. In fact these are better accommodations than are usually found in P-class racing boats.

Now as to speed, the all-important factor in racing. Take, for example, Intrepid's showing when pitted against the crack Q boats in the recent races for the $2,500 Thompson Cup at the Atlantic Yacht Club. Intrepid was not "skinned" out inside, neither had she been hauled to clean and dry just before the races as had the other boats. In the first race she met seven of the fastest Q boats in the country, and although she broke her steering gear and carried away the starboard spreader before reaching the windward mark, she finished in third place. In the second race she led to the first mark, and although when she hauled on the windward leg she again had trouble with her spreader and had to wait for two boats to pass until she could come about, she finished in fourth place. In the third and last race she was only beaten by Florence by 25 seconds for first place. Princess won the series, with Intrepid only one point behind and Eleanor third.

This record is given in detail merely to make our point that a boat does not have to be of the prevailing type of racer to be fast, but that a cruising boat may have a good chance under the rule if the element of speed is in her lines. The boat in question has nearly twice the displacement of the other Q boats and about 100 feet more sail, and was equipped with solid spars throughout. So far, she has held her own in light winds, as well as in strong breezes, and in one race her actual time over the same course was two minutes faster than one of the crack Class P racers. And this for a boat built nine years ago! In view of this cannot designers take a little more latitude in the matter of strength and cruising accommodations in their racing boats?

This is not an outcry against the prevailing rule. Good boats can be built under its restrictions, and a few have been turned out this year, as witness some of the new 31-footers on Massachusetts Bay. By all means give it enough permanence to warrant a thorough trying out. But it is a protest against an apparently needless sacrifice of all comfort in racing boats upwards of 35 feet over-all length.

PALMER

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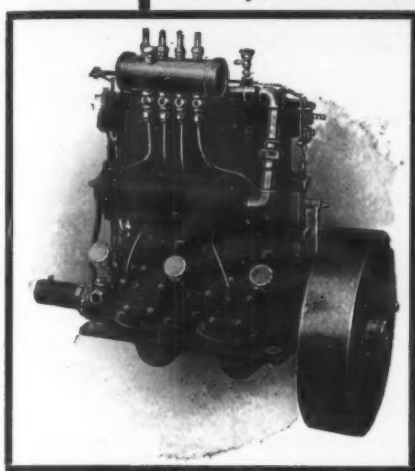

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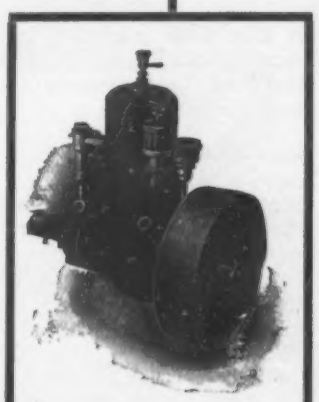

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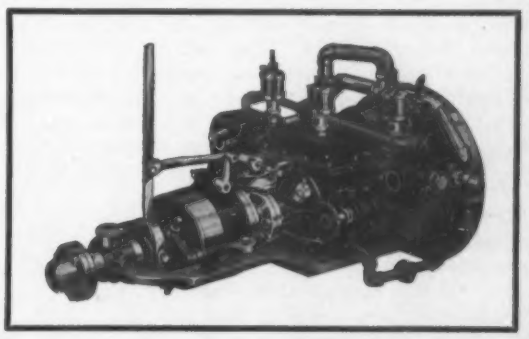

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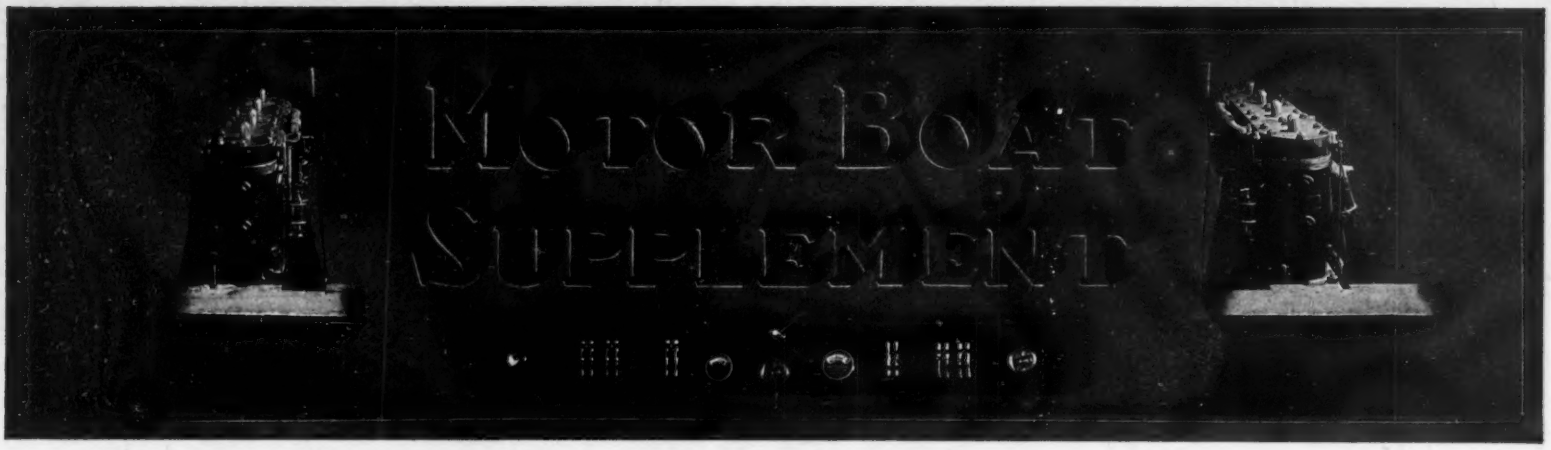
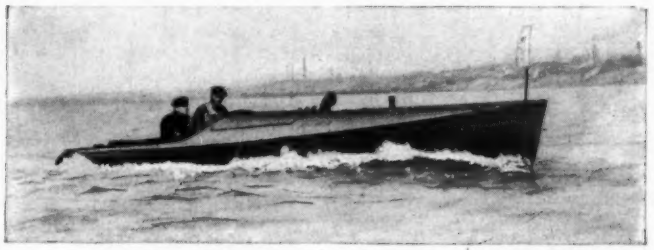


A Fast Boat and an Arrangement for Filling the Fuel Tank Quickly and Cleanly

Mosquito, a small speed boat, designed and owned by E. W. Granger and C. W. Myers, of Clinton, Ia., has proved to be a wonder for a craft of her size, being but 22 feet over all and 3½ feet beam. She is built of ⅝-inch cypress over strong, white oak frames, and is equipped with an 18-horsepower, three-cylinder Gray motor. She is believed to be not only one of the fastest boats of her length ever built, but also the fastest of her power, regardless of size, having a record of 22.8 miles per hour up stream. This record was made over a carefully measured course of 1⅛ miles, which was run in three minutes and thirty seconds. At Sabula, Ia., on June 7, this little boat easily captured the 26-foot class race, making the 10-mile course in 28.10. She also finished second in the free-for-all on the same date. The 26-foot class at the regatta at Rock Island, July 3, also fell to Mosquito, where she sped away from 26-footers having more than double her power. The surprise of the M. V. P. A. regatta at Burlington, Ia., July 5 and 6, was the 22-foot race, which Mosquito won in a jog, making 10 miles easily in 29.12¾.


22-footer Mosquito making 1⅛ miles in 3 minutes 30 seconds. She is equipped with an 18-hp. Gray, 3-cylinder engine.

The Gray Motor Company, of Detroit, Mich., have recently brought out a device which should be appreciated by every man who has laid alongside of a float in an exposed place, and had the gasolene slop all over his deck because he was trying to hurry the process of filling his tank before some boat came along and gave him its wash.

The device consists of a gasolene-filler plate of polished brass, with a self-contained air vent and strainer. This is to be connected from the deck of the gasolene tank with a pipe 1½ inches in diameter—a size large enough to permit the quick feeding of a large volume of gasolene and allowing, at the same time, an ample air vent up through the perforated disc in which the funnel is placed.

The new Gray Combination Deck-Plate and Gasolene Strainer.

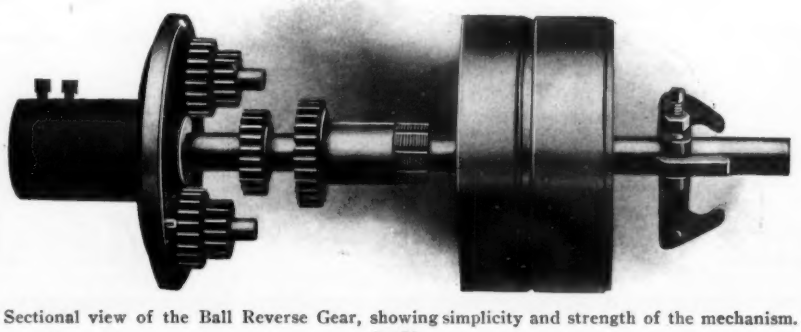
The strainer is in the form of a long cylinder of fine wire cloth, which can be lifted from the filler plate for cleaning whenever desired. This allows the quick filling of a tank by means of an ordinary funnel, and does away with the meanest part of the task. The loss of gasolene and the annoyance caused by its flooding the funnel from a poor air vent are entirely overcome by this device, which is bound to prove a strong candidate for popular favor.

Full details regarding dimensions, prices, etc., will be furnished by the Gray Motor Company upon request of readers of YACHTING.

A Reverse Gear of Quality and Dependability The extreme popularity of the motor boat brings each year into the sport thousands of men who have had no previous experience with power-propelled craft. Many of these, from financial considerations and a lack of appreciation of the importance of a reversing mechanism, purchase their craft, particularly in the smaller sizes, without any facilities for stopping and backing except in so far as they may be able to reverse their engines. A large proportion of these novices have had, by the end of the first season, impressed upon them in many ways the decided advantages of the inclusion of a reverse gear or a reversible propeller in their outfit.

The present is a particularly opportune time in which to make mention of the good features of the Ball Reverse Gear, while so many are studying the subject and deciding on what sort of an equipment to order for next year. A notable and exclusive feature of this gear is that the housing is keyed on to the engine shaft. This not only guarantees a measure of stability that it would be otherwise impossible to secure, but prevents the annoyances due to the escape of grease or other lubricants—a common feature in gear housings of the jointed or sectional type. As the principle described is protected by broad, basic patents, its use, except in Ball reverse gears, is prohibited.

The one-lever control method of operation of the Ball reverse gear, covering speed-ahead, neutral and reverse speeds, is also a modern feature of this gear, as is the brake band permitting the use of the lever in a horizontal position where so desired. As the true test of all reverse gears lies in the clutch construction, this feature of the Ball gear forms a basic principle in its dependable operation. The cone-clutch type is used, and this has only one adjusting part, which is in sight at all times. Its strength and durability are suggested in the illustration herewith.


Sectional view of the Ball Reverse Gear, showing simplicity and strength of the mechanism.

The policy of the New York Gear Works in using only the best hardened steel for use in the Ball clutch, coupled with the ease of operation and the minimum number of working parts, all under one-lever control, guarantees the utmost measure of dependability and surety—factors which, if ignored in a boat's equipment, are likely to prove costly under many conditions of operation.

A Gasolene Launch Does Hard Work for Uncle Sam The United States Reclamation Service has found use for a small gasolene launch in the work on the Salt River project at Roosevelt, Ari. The distance across the Tonto Reservoir is one-third of a mile, and a large ferryboat, 36 feet by 9 feet, is used for transporting workmen, horses and materials across this space. The only motive power for this ferry is a 20-foot launch in which a 7-horsepower Ferro engine is installed.

This boat is lashed to the side of the ferry, and while no speed records have been broken it has made a record of its own for steady, efficient service. In the past eight months the launch and ferry have made some 4,600 round trips of two-thirds of a mile each. This means that a total distance over 3,000 miles has been covered. The load carried has sometimes been as much as 12,000 pounds. Another interesting feature is the fact that almost 19,000 people and their belongings and 7,000 horses and mules have traveled on this route.

Meanwhile, the Ferro is continuing to secure a goodly share of popularity for more pleasurable uses, as some recent installations, the sales of which were made through the company's Eastern office, at 44 Cortlandt Street, New York City, seem to illustrate.

Mr. Charles E. Steinway, New

STANDARD OF RELIABILITY SIMPLICITY

"The Automatic"

This is the sort of engine—an engine that will take you all along the coast, from one country to another, or from one continent to another if you wish. We are not just talking, the "AUTOMATIC" has done it for others; it will do the same for you. To boost our yacht type engines, we have made a special price reduction on 6, 12, 18, 24 h.p. They are built in sizes of one to six cylinders, 6 to 150 h.p. Primarily for long distance cruising, for the man who wants to spend either his summers or winters away from home, and not put in for repairs while away.

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J. W. Enright Iron Works, 862 Tchoupitoulas St., New Orleans, La.
Henshaw, Bulkley & Co., 19-21 Fremont St., San Francisco, Cal.
King & Runyan, Pensacola, Fla.
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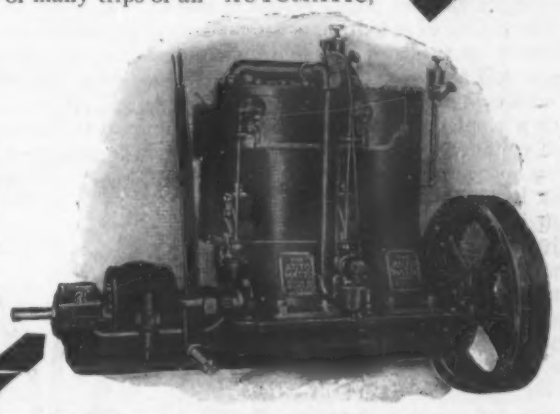
Harrison M. Reed, So. Jacksonville, Fla.
Reierson Machinery Co., Portland, Ore.
Southern Gas Engine & Power Co., 25 Broad St., Charleston, S. C. (Chas. E. Witmack, Manager).
Chas. W. Trigga, 60 N. Canal St., Chicago, Ill.
Florida Gas Engine & Supply Co., Tampa Fla.
Wallace Bros., Norfolk, Va.
Page Engineering Co., 119 E. York St., Baltimore, Md.
Fairbanks Co., New York, Boston and Philadelphia.



The Pigeon-Fraser Hollow Spar is the Best Spar in the World

We have never heard of a Pigeon Spar collapsing. Their special construction is the reason. Many of the owners of crack racing and cruising yachts of the country—both large and small—will use no other spar.

The Advantages of the Hollow Spar

are lightness and rigidity. These qualities are as essential on the cruising yacht as on the racer. Owing to the comparative lightness of hollow spars and the saving of weight aloft, the violent rolling and pitching in a seaway can be greatly reduced, with a consequent lessening of the wear and tear on sails and rigging. Write us about hollow spars for your boat.

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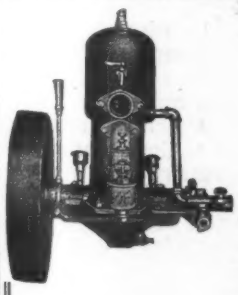

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is so simple to operate, the veriest novice will find it absolutely safe and easy to handle.

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The SMALL YACHT

Its management and handling for racing and sailing

By EDWIN A. BOARDMAN

THE author of "The Small Yacht" has had much practical experience in designing and sailing small yachts, having won the Sewanhaka cup from the Canadians in 1905, and in this book he describes in plain language, which may be easily understood by the amateur, some of the best methods for tuning up a boat. He also explains in detail how to get out of a scrape and how to put a competitor in one. The rules given have, in the majority of cases, proved successful, and are in use by crack amateur sailors. It will pay for itself in your next race.

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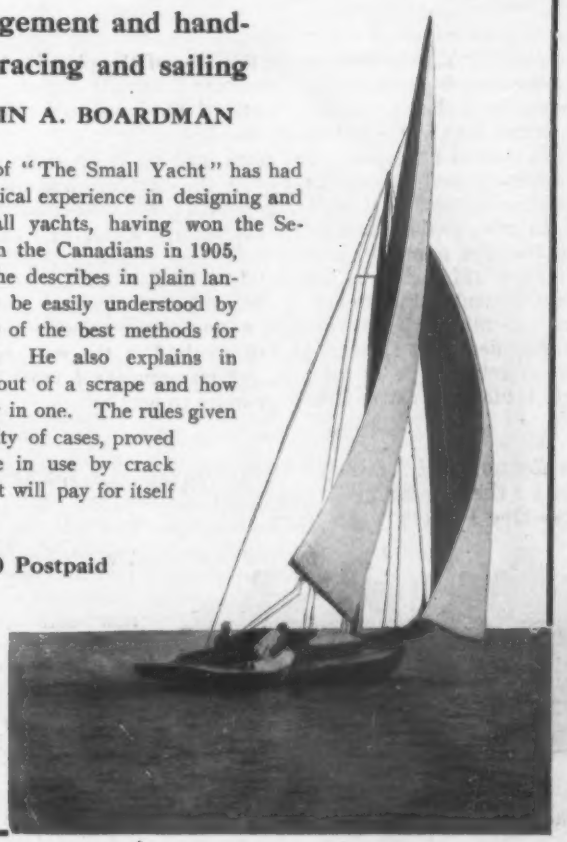


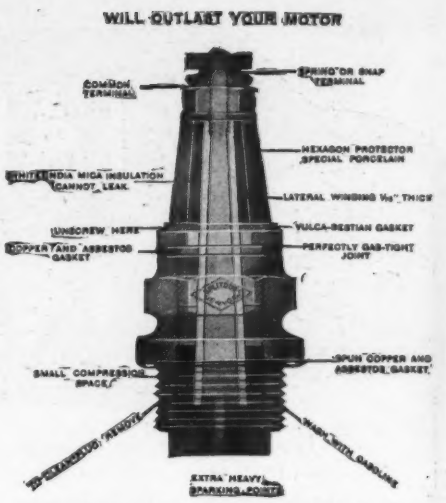
York City, recently had a semi-speed boat, 25 feet by 5 feet 8 inches, built by William Kretzer, New York City. This is a very substantial boat, built for comfort, and with a 15-horsepower Ferro makes about 13 miles. Rambler, owned by T. V. Roe, Tarrytown, N. Y., is a 55-foot by 10-foot 8-inch cabin cruiser, has a 25-horsepower Ferro, and is making better than 10 miles. Mr. Sands, of Seaford, L. I., has installed a 17-horsepower Ferro in his boat. A. P. Husted, Jr., Tarrytown, N. Y., has installed an 11-horsepower Ferro in his heavy sloop, which is 38 feet long.

Charles P. Irwin, of Red Bank, N. J., recently installed a 15-horsepower Ferro in his speed boat, 20 feet, and the same day won the Red Bank race over a 15-mile course. George E. Rider, Freeport, L. I., has installed a 7½-horsepower Ferro in his 45-foot sloop. David C. Preacher, Perth Amboy, N. J., has installed two 25-horsepower Ferros in large boats with twin propellers. Mr. H. Falco, Bergen Beach, L. I., has recently installed a 4-horsepower Ferro in his launch.

A Low-Consumption Coil and a High-Efficiency Plug

Among the leading Splitdorf specialties is the Splitdorf Coil, designed to give the highest electrical efficiency on the smallest amount of battery-force. Any one, without technical knowledge or mechanical ability, can operate it perfectly. It is equipped with the Bogert hammer vibrator. The coil has a double set of condensers, the main condenser to take care of the sparking at the vibrator points, and the auxiliary condenser, connected in shunt with the main condenser, to insure a single spark should the vibrator points refuse to work.

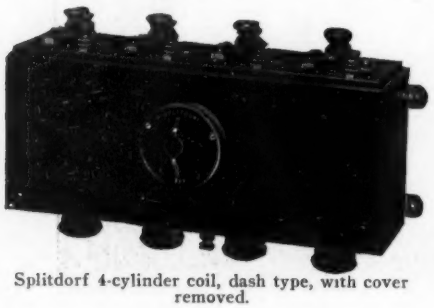
The Splitdorf synchronized distributing coil represents the culmination of years of study of the subject of firing a multi-cylinder engine with a single coil and vibrator. This is accomplished at exactly the proper time in each cylinder without any of the detrimental effects usually experienced with a single coil, as a different unit supplies the secondary current for each cylinder. The distributing vibrator is independent of the coil units, being a separate instrument, but is included in the coil box, being so placed that it may be easily adjusted at any time. The adjusting parts are of the tension vibrator type, with a ratchet screw for adjusting the vibrator point and a thumb screw for adjusting the tension of the vibrator spring, there being no necessity for the use of tools in either case. These new coils are made up in any number of units, and are mounted in the standard type of mahogany case employed for other Splitdorf coils. The Common Sense Plug is constructed in such a way as to obtain the longest insulating surface possible without increasing the size of the plug itself. To do this a mica bushing is formed on a taper consisting of lateral windings of mica composed of sheets the full length of the insulator. This mica bushing is inserted into a small bushing or nut, and is forced to a solid formation by the central electrode. The mica bushing is so extended on the compression end and beyond the end of the electrode and nut as to create an insulating surface of 1 inch. Outside of this, and immediately surrounding the mica bushing and lining the wall of the large steel bushing of the plug itself, a porcelain insulator is used which increases the insulating surface to 1¾ inches in length. In addition to this great length of surface, the insulated parts are so designed as to break up the carbon deposit, thus preventing it from forming a continuous circuit over the insulators. Another desirable feature of this method is the very small amount of space directly inside of the plug, which prevents it from becoming excessively heated and causing the insulators to break.



The Common Sense Plug, in which the insulated parts are so designed as to break up the carbon deposit.

The Economy of Keeping Tabs on the Condition of the Dry Battery

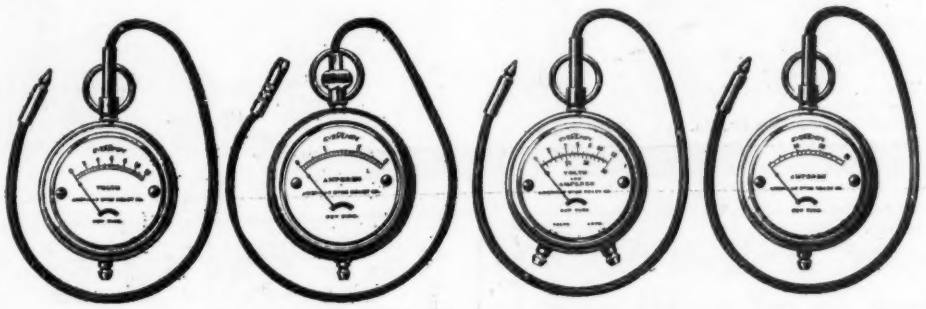
It is, comparatively speaking, only very recently that the average motor boat owner has come to realize that there was anything else to do, when his spark plugs failed to spark, but throw his battery away and purchase a new set. He has finally, through the missionary work of both battery makers and engine builders, become aware of the importance of testing his individual cells and weeding out the poor ones, which were only pulling down those which were alive.



Splitdorf 4-cylinder coil, dash type, with cover removed.

For a time many stopped right here, however, and as long as they were in a position to know what was the amperage of the battery and of each individual cell thereof they were happy.

They are gradually, however, waking up to the fact that an ammeter, pure and simple, only tells part of the story. For instance, undeniably the most economical method of connecting up dry batteries is in multiple series when the batteries are new, and using them in this fashion until the voltage falls below what is necessary to furnish a proper spark. Then by connecting up their batteries in straight series the very last available bit of juice can be drained from them. Just when the point to switch a multiple to straight series is reached can only be determined with any degree of accuracy by means of a voltmeter. Even with facilities to determine these two points, one has not the whole of the story at his disposal. It is when a battery is practically on its last legs that the change from multiple to series is desirable. Now, the length of life of the battery before it becomes necessary to drain it by the series connection depends upon the amount of amperage which the coil or coils are drawing from the cells. As a matter of fact any current in excess of from one-half to three-fifths of an ampere which a coil draws from the battery is practically wasted, and reduces the life of the battery that much.



A set of Ever-Ready pocket instruments, consisting of ammeter, low-reading ammeter, volt ammeter and voltmeter.

Just what any individual coil is doing in this way can only be ascertained by testing it with an ammeter; but the ordinary ammeter which is made for testing individual cells or batteries is worthless for this purpose, as it is not sensitive enough. What is needed for testing the drain of a coil on the battery is a low-reading ammeter with a minutely divided scale, which compares with the ordinary meter reading to 35 degrees as a stop-watch does to an eight-day clock, as far as delicacy and minuteness of record is considered. Such a meter will actually measure in fifths of an ampere or less, and the whole scale will not extend beyond two or three amperes.

A set of three instruments as described sounds pretty formidable, and until very recently the price at which they were necessarily sold really made them so. The American Ever Ready Company, of 308 Hudson Street, New York City, have, however, tried out a line of pocket instruments which fill the bill for practical purposes, and are sold at a price which makes the cost of a set of these instruments a mere trifle.

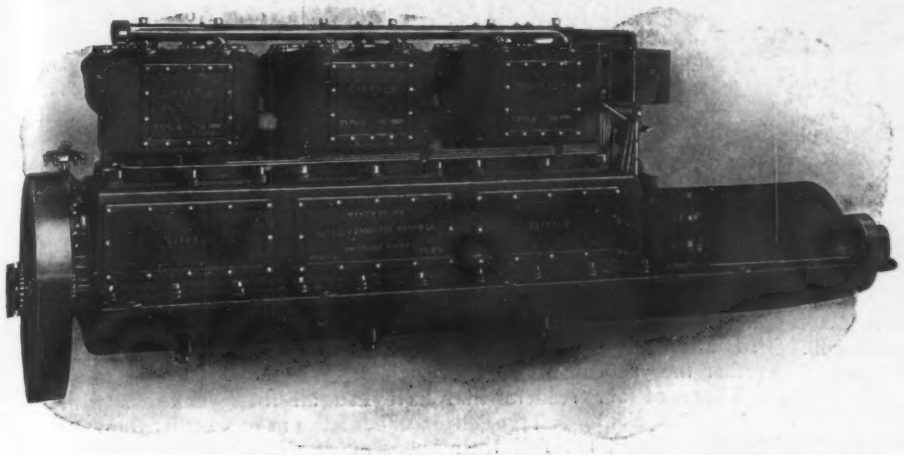
The merits of these instruments are based upon simplicity of construction and the smallest number of working parts, and they are, therefore, not liable to get out of order when given the hard service to which they must necessarily be subjected by those who do not have very deep knowledge of matters electrical.

They are practically dead beat; that is, the needle will come to a rest almost instantly and in two-thirds less time by actual test than any other instrument on the market. This is very important, as in testing a battery the instrument makes a dead-short circuit and runs the battery down very fast. A quick reading means saving of battery.

On most other makes the user must find the positive pole of the battery and connect the positive pole of the instrument to same before taking a reading. Some purchasers will buy a type of instrument of this kind, and if he happens to connect the wrong poles to the battery, and he does not get a reading, he condemns the instrument. On Ever-Ready instruments this does not happen. One can take a reading from either pole. In other words, it does not make any difference which side of the instrument is connected with the battery.

The Ever-Ready instruments have a rich appearance and a fine finish, and the movement looks the part of an expensive instrument. The wire is insulated with a silk winding. All parts are made by expensive tools.

No. 1,002 ammeter is for testing dry cells for amperage. Scale shows



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All adaptable good features of other models and distinct and new ideas and improvements make this machine the "last word" in modern engine construction.

The "BUFFALO LINE" comprises engines for any size and for any type boat—three distinct types and a wide range of sizes. Send for handsomely illustrated 48-page catalogue—free for the asking.

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Let us send you one of our new 1909 Marine Catalogues.
We carry a full line of Oils, Greases, Spark Plugs, etc., in fact everything used in connection with motor boats.

Universal Auto & Motor Boat Supply Co., 113 Chambers St., New York City

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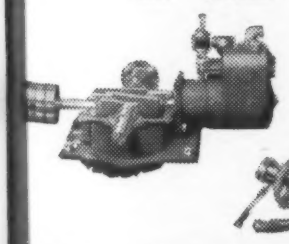
IS ONE STRONG POINT



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Let us tell you about its economy—smooth operation stability.

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USE 3 IN ONE OIL

No other oil can take its place on yacht or motor boat. No other oil is half so good for keeping everything bright, shiny and in perfect ship shape.

3 in One makes brass parts and trimmings shine like new because 3 in One overcomes the tarnishing, corroding, aging action of salt water and sea air. 3 in One cleans and preserves woodwork, removing the spots, scars and stains of years from varnished surfaces.

Electrical Machinery, tools, gun locks and gun barrels all need 3 in One. It lubricates perfectly and prevents rust in any climate—on any water. Just a few drops on your strop and razor makes shaving easy. It preserves your strop, your razor and your face.

FREE Try 3 in One at our expense. Write for free sample bottle and valuable booklet.

3 IN ONE OIL COMPANY

27 Broadway, New York

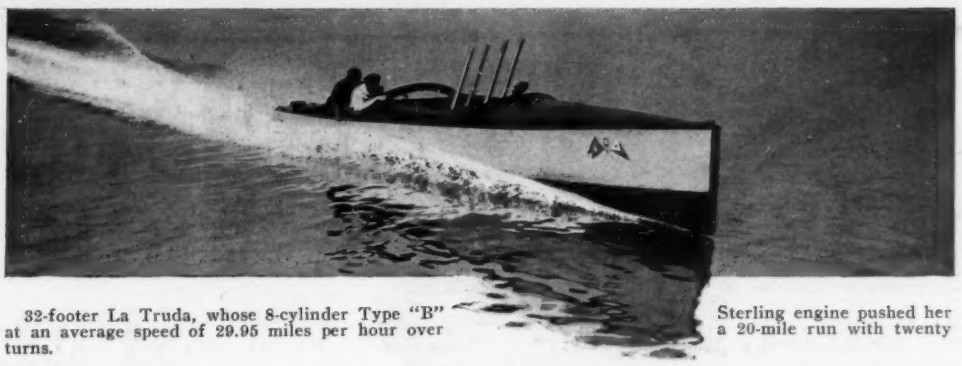
O-35 amperes on the latest instruments. A good, dry cell, ordinary 6-inch size, when new, should show over 22 amperes, and is not much good for ignition when it gets below 12. Other instruments are as follows:

No. 1,003 volt ammeter. One scale shows amperage, the other O-14 volts.

No. 1,005 volt meter, O-10 volts. Is for showing voltage, and is used principally on storage batteries. No. 1,007 coil testing meter is a very important addition to the line. It is used to determine the amount of amperage consumed by a spark coil. Often batteries run down too fast and are condemned when the coil is at fault.

No. 1,008 battery and coil meter is for finding the amperage of dry cells and amperes consumed by coil. With this combination instrument it is easy to discover the weak points in the ignition system.

Full description and prices of these instruments, with literature on the subject, will be gladly furnished by the American Ever Ready Company, at 308 Hudson Street, New York City, to all readers who will mention YACHTING when writing.



32-footer La Truda, whose 8-cylinder Type "B" Sterling engine pushed her at an average speed of 29.95 miles per hour over a 20-mile run with twenty turns.

Letchworth Trophy Won by La Truda and Her Sterling Engine

The speed boat La Truda, owned by Vice-Commodore Henry T. Vars, of the Buffalo Motor Boat Club, furnished the sensation of the day in the speed boat races held on the Niagara River September 11, when she romped over the finish mark just eleven seconds ahead of Whitelock's marvelous Hoosier Boy. The race was the prettiest seen on the Niagara River this summer, and the throng that lined the river shore showed its pleasure by loudly cheering both boats as they crossed the line.

But four boats lined up at the start out of seven that were entered. They were Buffalo II, Hoosier Boy, La Truda and Red Head. At the gun Hoosier Boy leaped away first, with La Truda close after.

Before the boats came back down the river on the first lap La Truda was about five seconds ahead of Hoosier Boy, with Red Head and Buffalo strung along some distance in the rear. At the 5-mile mark La Truda was twelve seconds ahead of Hoosier Boy, and this lead was kept up throughout the race. Red Head was forced to quit on the second round on account of engine trouble.

The second 5-mile lap was made by La Truda in the fastest time of the entire race, as she went at the rate of just 30 miles an hour. The same order of La Truda, Hoosier Boy and Buffalo II was kept up to the finish.

In addition to the boats that competed for the Pratt & Letchworth trophy, Arab III, H. S. and Courier II were entered. The first two were on hand but did not start.

This race closes the speed-boat racing season on the Niagara River, and it was a most entertaining close to a very successful season. The summary follows:

La Truda, owner, Henry Vars; elapsed time, 40.13; average speed, 29.24. Hoosier Boy, owner, Whitelock; elapsed time, 40.24; average speed, 29.75. Buffalo II, owner, A. F. Dohn; elapsed time, 47.00; average speed, 24.00.

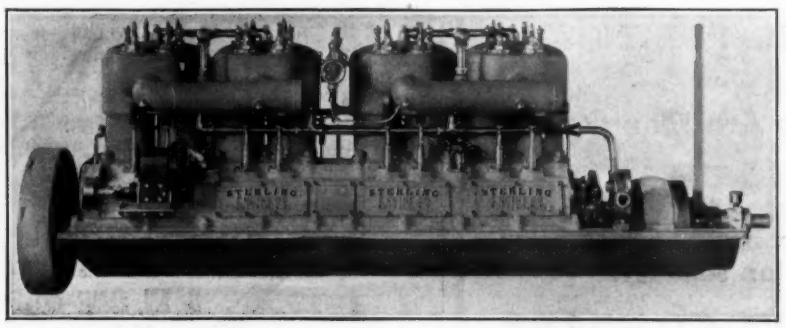
A mooring that stands high enough out of the water to allow of the line being easily passed from the deck.

Something New in Mooring Buoys

After you've almost run over your buoy, just awash in a strong tide, made three ineffectual stabs with a boat hook for the ring, skinned your wrist on a stanchion or put a crick in your back by leaning down from the forward deck, you are in a position to realize the good points of a buoy whose mooring ring floats on a level with your deck—a buoy that you can run right alongside of, and pass your mooring line through a good, big ring without trying any fancy work with a boat hook. This is the kind of a buoy that the Jordan Bros. Lumber Company, of Norfolk, Va., has brought out this season. It is made in 5, 7 and 10 feet lengths, so that no matter how big your boat is your mooring ring will be somewhere in the vicinity of your rail.

Moreover, it is a buoy that stands up out of the water, and which you can spot a long distance off. It acts as a dolphin, and takes the strain off the cable when a squall hits the boat, and it is altogether one of the most comfortable things that the yachtsman, or rather the yachtsman's boat, ever tied to.

Those of our readers who have had all the gymnastics with boat hooks, and all the delightful anxieties as to whether they would or would not find their buoys afloat when they returned to their moorings, and who really want something that is worth while for a mooring buoy next season, had better write the Jordan Bros. Lumber Company for prices and descriptions, stating they saw the device mentioned in YACHTING.



The 8-cylinder Sterling engine of La Truda.

The Boston Motor Boat Show Expected to Eclipse its Previous Record

The last week in January may seem a long ways off, but it is surprising how soon it will arrive. Already the motor boat enthusiast is making up his mind regarding the craft and engine which he will use next season, and, in fact, is adding daily to his mental inventory the bits of equipment which this season's experience has shown him will be valuable adjuncts to his craft.

The seasoned veteran in the sport, the novice of the vintage of 1909, and the prospective power boat owner are all looking forward to the show season for visible and tangible evidences of the improvements that have been made in craft, motors and accessories for the season of 1910.

To these YACHTING makes the welcome announcement that the promoters of the Boston show promise that the exhibit, which will be held in the Mechanics Building during the week of January 22 to 29, 1910, under the auspices of the New England Engine and Boat Association, will surpass all previous records, both in general interest and beauty of decorations.

General Manager Chester I. Campbell has an entirely new decorative scheme in view, which will be even more beautiful than last year, when it was thought the acme of great shows was reached. In fact, press and public pronounced it "one of the greatest, if not the greatest, expositions ever held in this country."

The manufacturers of boats, engines and accessories were most generous in backing up the mangement with elaborate displays, really the most wonderful ever assembled. This resulted in a very successful show from a financial standpoint and great personal gain to the exhibitors.

The interest in motor craft has been at fever heat all season in the East, and many prospective buyers are looking forward to the next show as a means of information on the respective merits of the various makes.

In an interview with Mr. Campbell by a representative of YACHTING, he was enthusiastic over the prospects of the coming show, reporting that more applications for space had been received to date than in any previous year. In fact, he urges the importance of the early application of those who have not already done so, as the indications are that space will be at a premium, and that late comers will find the best positions pre-empted.

Every one who attended the last Boston show, in the capacity of either exhibitor or audience, will remember the splendid showing made by concerns covering the entire field of engine, boat and accessory industries, and this promise of the management for an even better representation of these for 1910 sounds good, not only from the viewpoint of those who come to see, but as indicating a healthy growth of interest in the trade.

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ARE EQUIPPED WITH

The Safety Storage System

Adapted to any size craft—Sail or Power. Tank can be stored anywhere.
Tank of convenient size for whole season's lighting.
Economical to install and maintain.
No working parts. Nothing to get out of order. Empty tank exchanged for full.
Permitted by National Board of Fire Underwriters and U. S. Steamboat Inspection Service.
Illustrated booklet and estimates cheerfully furnished.

The COMMERCIAL ACETYLENE CO., 80 Broadway, New York City

SINTZ
STRENGTH
SPEED CONTROL
REVERSING PROPELLER

All the Advantages Of a Reverse Gear

But none of its Weak Points

That pretty nearly tells the whole story of the "Sintz" Rerversing Propeller, yet we would be more than glad to prove point by point its superiority over any reversing device. Our literature is not composed of "glittering generalities."

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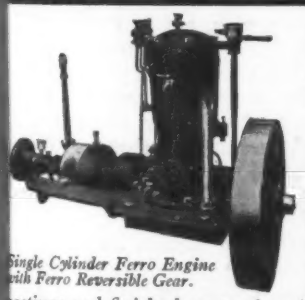

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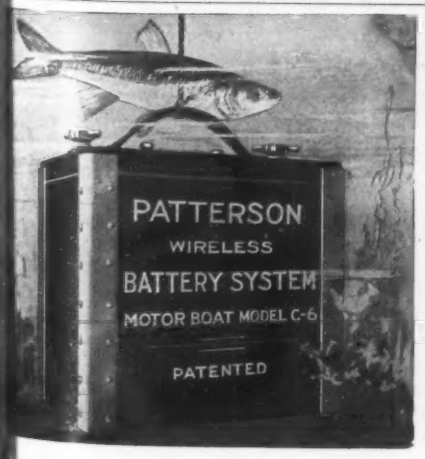

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Driftwood

Hudson River Y. R. Association's Annual Regatta

THE fifth annual regatta of the Hudson River Yacht Racing Association was held on the Tappan Zee, off Tarrytown, on Labor Day, September 6. It was, without doubt, the greatest motor boat gathering of the year, and the long programme of events was well contested.

There was considerable disappointment that the Maxwell-Driscoll, entered in the first division of the speed boat class, was withdrawn at practically the last moment. Of the seven entrants in this division but three, Jan II, Elmer L. and Comet, went over the line. Elmer L. was the winner and Comet did not finish.

In the second division Artful was the winner, finishing in 52.57. In the third division, which was contested by Vim and Gracious, Vim made the 20 miles in 1 hour 7 minutes and 37 seconds. Gracious did not finish, The names of the boats which started and time made by them follow:

AUTO CLASS—20 MILES

	First Division Elapsed Time.	Corrected Time.
Jan II, Highland	1.01.27	1.01.27
Elmer L., Albany	0.45.30	0.36.40
Second Division		
Scamp, Yonkers	1.04.53	1.00.20
Artful, Tarrytown	0.52.57	0.52.57
Third Division		
Vim, Tarrytown	1.07.39	1.07.39
CLASS A—CABIN BOATS—10 MILES		
Naiad, Tarrytown	.....	1.42.05
CLASS B—CABIN BOATS—10 MILES		
Isabel II, Poughkeepsie	.....	1.37.07
Grace, Tappan Zee	.....	1.51.47
CLASS C—HUNTING BOATS—10 MILES		
Bucky, Poughkeepsie	1.23.24	1.10.30
Not Yet, Yonkers	1.53.19	.....
Widgeon, Albany	1.20.51	1.20.51
CLASS D—HUNTING BOATS		
Lida M., Tarrytown	1.31.58	1.31.58
Angler, Tappan Zee	1.50.09	1.49.07
Ariel, Tarrytown	1.51.54	1.46.47
CLASS E—OPEN BOATS—10 MILES		
Foxy Quiller, Tarrytown	1.22.42	1.22.42
Isabel, Yonkers	1.33.45	1.31.54
Presto, Tarrytown	1.33.48	1.29.21

From the Designer of Kitcinque

The following letter from Mr. Morris M. Whitaker, designer of the motor boat Kitcinque, in which he takes exception to the statement of Mr. Handley's regarding boats of this type, has recently been received by us. We take pleasure in publishing this letter, which opens up an interesting subject:

Editor of YACHTING: NEW YORK, September 8, 1909.

On page 198 of the September issue, in an article on the Marblehead race by Mr. L. DeB. Handley, are some references to the motor boat Kitcinque, designed by me, to which I feel that I should take exception, as the writer of the article makes his statements from opinion and without knowledge of the facts when he says that "A craft of this type cannot be driven at anything like its best speed in a heavy seaway," and practically states that it is not suitable or is not the best for such a race as the New York-Marblehead. In making the design of Kitcinque, these points were all taken into consideration, and although the hull was considerably lighter than the usual run of cruising motor boats, by careful designing and arrangement of materials the strength of the hull was really greater than the general run of boats of this size. As an illustration of the principle involved, one might cite the modern lightweight bicycle as compared with the heavy affair of years ago. Weight of itself does not give strength; in fact, is often the cause of weakness, and a careful strength calculation of this boat shows her to be better off in a heavy sea than a boat of the usual form and construction. The model was gotten up especially with the possibility of encountering heavy weather, and every provision for the maintaining of the speed under these conditions was carefully considered. While there is, of course, a diminution of speed for all boats in a heavy sea, as a matter of fact a boat of this size, type, speed and construction suffers less than a boat of the same size and ordinary speed and construction when operated in a heavy sea, for she does not wallow as a slower boat would, and as the slower boats did in this very race, judging from reports from the crews of the different boats.

From Fire Island east in this race there was a fairly heavy following sea, but Kitcinque took it without difficulty, and her speed from the log between Fire Island and Montauk Point was greater by nearly 2 miles per hour than between the start and Fire Island light. The speed at which a boat of this type can be driven, or any high-speed boat, in fact, depends upon the nerve and endurance of the crew, and the best parallel that can be quoted is the statement of the naval officers that the speed of torpedo boats, also lightly built, can be maintained in practically any sea so long as the crew are able to drive them.

A few years ago it was thought necessary to build motor boats with heavy-sawn frame construction—a legacy from the old sailboat days. Designers gradually appreciated the fact that a less amount of material properly placed would secure better results, and the hull of an ordinary modern boat probably weighs 30 per cent less than a few years ago was considered absolutely necessary. Kitcinque is another step in the evolution of the motor boat and a still further cutting of useless weight. The naval architect who designs a commercial vessel and loads it with useless material would soon be without clients, and, by the same token, the designer of motor boats who runs up the owner's gasolene bill by useless weight of ballast will soon be in the same category. Unfortunately, delays in completion did not give as much time for trying her out as could be desired, but she was put through Hell Gate at a time when it was alive with traffic and with the tide running against the wind, and the way she took the seas from all directions proved conclusively to those aboard that her hull and form were all right for the purpose intended.

I also take exception to the author's remarks anent high-speed motors. In certain cases, like the one under consideration, it makes for better efficiency to use the more highly developed, lightweight motor and run it at moderate revolutions than to use the heavyweight, low-speed motor and overload the hull. The former gives its horsepower at reduced speed on a lower weight than the latter, and with clean lines and a good form equal, if not better, propeller efficiency can be obtained even in heavy weather and at slightly higher revolutions.

Very truly yours,
MORRIS M. WHITAKER.

Mr. Whitaker makes a particularly strong plea for his boat, and in many points we agree with him, particularly in regard to the amount of needless weight entailed in heavy construction, but in the absence of more definite information as to her construction, and without seeing adequate plans of the boat, we would like to have more light on the question of whether a boat of this speed could be driven proportionately as fast in a hard head sea as a slower, more heavily-built boat. For example, a boat of the normal speed of 10 knots in a hard, cresting sea that was forward of the beam could be driven possibly only 7½ miles an hour, losing one fourth of her efficiency. At 18 knots, Kitcinque's estimated speed, the loss of one-fourth of her efficiency would bring the speed down to 13½ miles an hour. Whether a boat only 40 feet in length, no matter how strongly built, could be driven outside under the conditions mentioned at a speed anything like this seems improbable, taking conditions, of course, as they may be met in a strong breeze of wind on the open sea. These conditions, of course, are unusual during our summer racing, and naval architects are justified, perhaps, in designing pleasure boats for normal conditions.

Some Recent Sales and Charters

The following sales and charters through the agency of William F. Higgins, 45 Broadway, New York, are reported:

The 38-foot hunting cabin launch Emilita, for Frank R. Pentz to Percy K. Hexter, Rye, N. Y.

Raceabout Vagabond, for T. W. Satterthwaite, of Oyster Bay, L. I., to H. H. Pike, of Greenwich, Conn.

The 56-foot power boat Wolverine, for Howard Douglass, of New York, to Oliver W. Thomas, of New Brunswick, N. J.

Hunting cabin launch Hope, for Percy K. Hexter, of Rye, N. Y., to Gilbert M. Tucker, Jr., of Albany, N. Y.

The 40-foot Burgess sloop Ondawa, for Gen. David E. Austin, of New York, to Edward A. Doyle, of Lynn, Mass.

The 36-foot raised-deck cruiser Hortensia, for Charles Forman, of New Brunswick, N. J., to Joseph R. Stulb, of Philadelphia, Pa.

The 60-foot twin-screw power yacht Delilah, for W. Harold Powers, of Red Bank, N. J., to Dr. A. R. Ladoux, of Cornwall-on-Hudson.

The Hollis Burgess agency reports the following sales:

The 35-foot sloop Sakuntala, owned by Charles K. Cummings, of Boston, to John P. Hartt, of Boston.

The 22-foot sloop Peggy, owned by Leland T. Powers, of Brookline, Mass., to Joseph B. Jacobs, of Boston.

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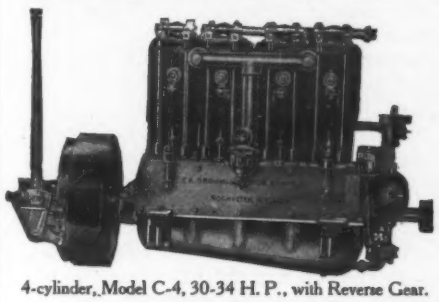

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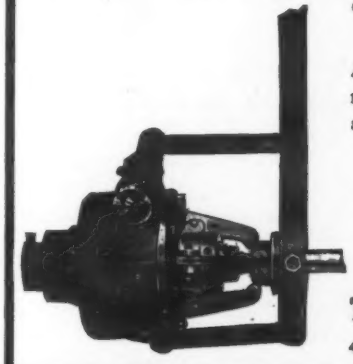

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News of the Yacht Clubs

Cruise of the Frontenac Yacht Club

The first annual cruise of the Frontenac Yacht Club, of Frontenac, Thousand Islands, N. Y., was held September 6 to 9, 1909, the following yachts participating: Rebemar, Acting Commodore J. W. Friend; Verdi, Vice-Commodore Walter Jerome Green; Navajo, Hon. H. A. Richardson; Charlietta, Fred Frazer; Jule, Alfred Costello, and Rowena, Joseph Wittmann.

The fleet weighed anchor on the morning of the 6th, at eleven o'clock and, passing in review before the club house, with the Rebemar acting as flagship, made a very impressive sight. The start was made in the teeth of a southwest gale, which continued throughout the day. A heavy sea was encountered while crossing the foot of Lake Ontario, and, to add to the excitement, a sailor from Jule was washed overboard, but was promptly rescued.

At sunset the squadron dropped anchor in the harbor at Picton, Ont., on the Bay of Quinte. During the evening the yachts were illuminated with electric lights and captains and guests entertained aboard the flagship Rebemar.

On the morning of the 7th anchor was weighed at eight bells and the squadron got under way for the head of the Bay of Quinte. Arriving there, command was transferred to the Verdi and Rebemar entered the Murray Canal bound for winter quarters at Detroit, Mich. The fleet then started back through the bay, making a stop at Belleville, Ont., and anchoring for the night at Picton, Ont. The day's run was most delightful and the scenery of the bay much enjoyed by all hands. In the evening captains and guests assembled aboard the flagship Verdi.

On the morning of the 8th, signal was made at eight bells to dress ship, and shortly after the squadron got under way, gayly dressed and with homeward-bound pennants flying. Home port was reached in the early afternoon, where the flagship saluted in front of the club house, while the yachts responded by dipping their ensigns.

The cruise was inaugurated at a time of the year when activities among the islands are about to cease, consequently the fleet was not a representative one. It is the intention to make the event an annual one and next year to start earlier in the season, with the prospect of taking out a larger fleet. All who participated in the recent cruise look forward to a more extended one next year.

Dorchen Wins Foster Cup

The races for the Sumner H. Foster cup were sailed off Cleveland last week and won by A. W. Finlay's Dorchen II. The cup was won last year by Hayseed from Dorchen I and held by the Lakewood Yacht Club. Mr. Finlay had Dorchen II built and raced against Bonitwo, owned by E. J. Schmidt. Mr. Finlay has promised the Lakewood Club a cup, for which the 18-footers will race next year.

Jubilee Yacht Club

The Jubilee Yacht Club had races for power boats and for dories on Labor Day. Ruth A., owned by Doyle and Waitt, won the Trowt cup and a leg on the Vitton cup. The results:

Power Boats.—Ruth A., 1:00:00; Davie II, 1:00:20; Igo, 1:10:54; Tony Boy, 1:05:04; Lorie, 1:05:45; Ronomor, 1:10:50; Lois, did not finish.

Sailing Dories.—J. Rosencan, 1:02:50; R. Davenport, 1:04:00; H. Cross, 1:05:20; J. Kennison, 1:08:03; E. L. Butler, 1:14:00; E. Mackintosh, 1:14:20.

Boston Yacht Club

The Boston Yacht Club closed its season last Saturday with a regatta sailed off the Hull Station. The wind was east, light. In the first special class Pontiac won, with Marie second and Marie L. third. Gringo won in the second class and the allowance made no difference in the results. The times:

First Special Rating Class.—Pontiac, 1:07:59; Marie, 1:19:38; Marie L., 1:19:45.

Second Special Rating Class.—Gringo, 1:21:49; Jacobin, 1:25:45; Fancy, 1:24:44.

Class I, Eighteen-footers.—Mirage II, 1:25:44; Aurora, 1:28:14.

Hull Fifteen-footers.—Nicknack II, 1:31:43; Kid, 1:32:48; Bonifor, 1:33:28; Smelt, 1:35:17; Tad, 1:35:45; Mink, 1:38:11; Pals, 1:39:11; Eagle, 1:39:23; Ariel, 1:40:37; Toogles, time not taken.

Newport Yacht Racing Association

The Newport Yacht Racing Association has elected the following officers for the ensuing year: President, George L. Rives; vice-president, Frank K. Sturgis; secretary and treasurer, Charles L. F. Robinson; governing committee, Frank K. Sturgis, William G. Roelker, Max Agassiz, John R. Drexel, Royal Phelps Carroll, Henry F. Eldridge, Elbridge T. Gerry, H. O. Havemeyer, Jr., C. Oliver Iselin, Pembroke Jones, Edwin D. Morgan, George L. Rives and C. L. F. Robinson.

Youghiogheny Boat Club

A race for the championship of the Youghiogheny-Monongahela Rivers was held by the Youghiogheny Boat Club, August 25, over a three-mile course.

The free-for-all event was won by Grey Wolf II, a 30-footer 20-horsepower, owned and built by J. Curry, of Elizabeth. Time 10 minutes 13 seconds. Hist, of McKeesport, F. J. Lloyd owner, was second; time 10 minutes 15 seconds.

Officials for the race were: Mayor H. S. Arthur, referee; D. S. Tobin, Commodore Thayer, judge; W. B. Patterson, starter; W. Knight, timer; H. S. Dravo, clerk of course.

The next regatta will be held October 5.

Huntington Yacht Club

The annual election of the Huntington Yacht Club was held on September 3, after the race of that day, and the following were elected to serve for the ensuing year: Commodore, Mr. August Heckscher; vice-commodore, Mr. H. H. Gordon, Jr.; rear-commodore, Mr. Geo. D. Bangs; secretary, Mr. E. B. Jacka; treasurer, Mr. S. Shaeffler; trustee, Mr. W. N. Kenyon. All elections were unanimous, there being fifty members present.

A very prosperous season for the club was reported, the facilities of the club house being largely increased by addition of new ball room and restaurant. The dining room is designed after a ship's cabin.

The result of the race of February 3 was very close. There were ten boats of the 30-foot class, and the winners finished within 10 seconds of each other. The winning boats were: First, H. Gordon, Jr., Gertrude; second, W. N. Kenyon, Irene; third, Mr. Geo. Bangs, Fay.

Colonial Yacht Club

The first annual motor boat race around Long Island conducted by the Colonial Yacht Club took place on Saturday, August 7. The start and finish were off the club's anchorage at 140th street and the Hudson River, the course being down the Hudson, around the outside of Long Island, through Long Island Sound and Hell Gate, rounding the Battery, thence to the club house. The start was at 2:10 p. m., first gun at 2:00, second at 2:05, third at 2:10, when four boats started on what turned out to be one of the most enjoyable runs that could well be imagined, the sea being as smooth as glass and fit for a row boat race.

Virginia, owned by Mr. Geo. B. Schilling, being scratch boat, allowed the others as follows:

	Hours.	Min.	Sec.
Snap Shot, J. B. Lindeman.....	3	9	10
Irene II., S. W. Granbery.....	3	10	3
Elmo II., F. D. Giles, Jr.....	4	20	6

Virginia, Irene II and Elmo II got off at the gun, with Irene II about half a length in the lead, Snap Shot not leaving the float until the last gun. Virginia immediately took the lead, but fell back to second place within the first mile, then took the lead again. This sea-saw between Virginia and Irene II kept up as far as the Battery, first one being ahead, then the other, until at last Irene II took the lead and maintained it for the entire race. Off Jones' Inlet, when Virginia was evidently closing up the gap between them, she was forced to stop on account of carburetor troubles. This caused her to lose so much time that she was practically out of the race, but still continued on the course and finished third.

SUMMARY OF THE RACE.

START, 2.10 P. M.

Finish.	Elapsed Time, Hrs.	Min.	Sec.
Virginia.....12:12:15 Monday A. M...	34	2	15
Snap Shot....Did not finish.			
Irene II.....7:59:01 P. M. Sunday....	29	39	01
Elmo II.....9:20:34 P. M. Sunday....	31	00	34

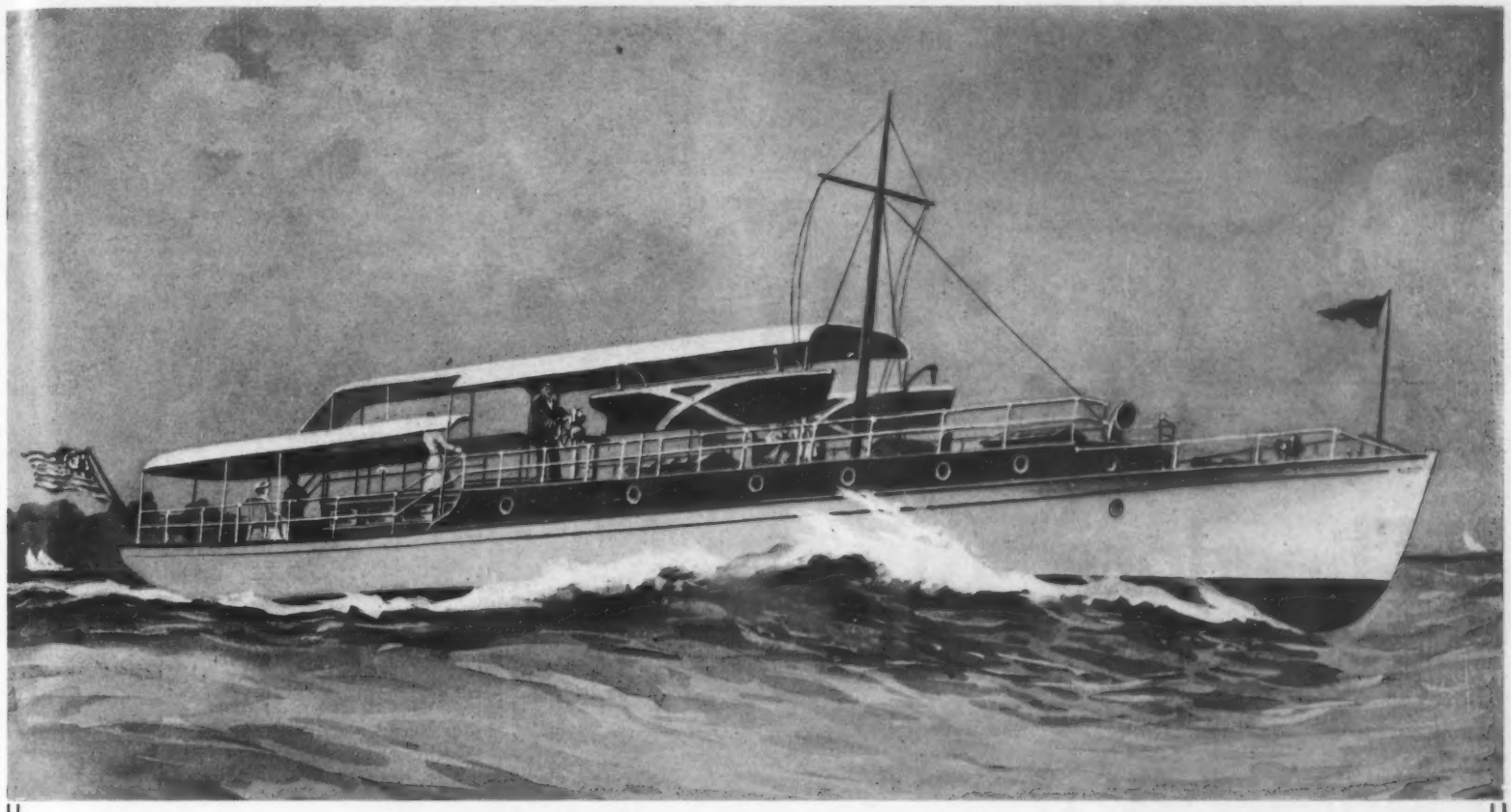
New Club House for the Motor Boat Club of Buffalo

The Motor Boat Club of Buffalo is to have a new club house on the Niagara River to replace the one burned on July 16. The house that was burned was one of the handsomest on the Great Lakes, and had been recently completed.

At a meeting of the club held the following week, it was decided to proceed at once to rebuild. In the meantime the club has obtained temporary quarters, and arrangements were made to take care of the club members and boats during the season. It is expected that the new club house will be ready early next season.

Annual Cruise to Lloyd's Harbor

The annual cruise to Lloyd's Harbor over Labor Day, in which the New Rochelle Yacht Club, the Huguenot Yacht Club, the New York Athletic Club, the Harlem Yacht Club and the Lloyd's Harbor Club participated, was a great success. This was the fifth annual event of its kind. One hundred and three yachts were anchored in Lloyd's Harbor on September 4, while over 400 yachtsmen were at the clam bake and games which were held on the beach that afternoon. A number of the clubs gave prizes for the race to Lloyd's Harbor, and there were prizes for the race back on the return trip. In addition to the clam bake there were water sports and yacht tender races.



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Burlington, Vt., Sept. 4th, 1909.

Mr. Charles L. Seabury, Morris Heights, N. Y.

Dear Mr. Seabury:—You may be interested in learning what the "Cayuga" did on the trip to the "1000 Islands" and return.

We ran something over 764 miles, on 455 gallons of gasolene, an average of 1.76 miles per gallon. Average speed, 9¼ miles. Average consumption of gasolene per hour, 5.409 gallons. (Including time run to heat water.)

We went up the duPlat and Gallop rapids and came down the same, also the South Sault rapids. Most of the way we had heavy head winds.

During the whole trip the engine never missed one explosion.

In the average consumption per hour is included the time the engine was run at the dock to heat water for baths and galley. Since, we have connected the exhaust with the bath tub and sink. Of course, one must take into consideration the current down part of the river, but this is offset by the current met going up the river.

I trust you had a satisfactory trip to Alexandria Bay.

Very sincerely yours,

(Signed) CLARENCE MORGAN.

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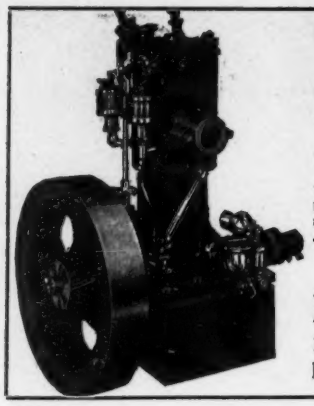

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AFRICAN TRIP

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It begins in the OCTOBER number and will run for a year

No contribution to magazine literature has created such world-wide advance interest. Publishers in England, France, Germany, Austria, Australia and Canada have sought to obtain rights for simultaneous publication, and this before a line of the account has appeared.

In October, Mr. Roosevelt describes his caravan and outfit, the beginning of his journey through a country that was like a "great zoological garden," and his early hunting experiences.

In November he will give his impressions of an East African Ranch, and describes his first successful

LION HUNT

Kermit Roosevelt has made most of the photographs

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Enclosed find $3.00 for subscription to SCRIBNER'S MAGAZINE for one year.

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Y. .....

Special Yawl Race of the Riverside Yacht Club

A series of special yawl races was held by the Riverside Yacht Club on September 1, 2 and 3. It was the intention of the club to get the yawls racing in these waters together, forming a special class for the three days' racing, a cup to go to the winner, on points. Memory, owned by R. H. Nixsen, won the series, with a total of 12 points; Escape, Geo. Matthews, was second, with a total of 8 points, and Zaloma II, W. W. Wood, was third.

Quincy Yacht Club

The winners of the season's racing of the Quincy Yacht Club in Boston Bay has just been announced. They are the catboat Iris, F. F. Crane, owner, and the power boat Maheen III, W. S. Hibbard owner.

From Put-In-Bay to the Welland Canal

(Continued from page 306.)

in fighting trim. "Guess we'll have to take Rocky River" was the unanimous verdict as we saw how the waterworks crib had drawn out on our weather bow again, while the bluff of the Lakewood port was once more just on our lee quarter. And night was coming on.

"Lakewood it is," we all said.

So we stayed her and started the sheets, and steering wildly as before, she went ploughing off towards the river mouth. Short as were her wings, and heavily as she steered, she fled rapidly for shelter. The dinghy, towing stern first—for we had to take things as we found them—piled up a "bow-wash" in front of her flat sternboard like the fuss before a Dutch galliott. The wave piled high, burst inboard on her, and rapidly filled her. Then she rose completely on end and emptied herself just as we neared the harbor entrance. There, to port, a wild swirl of broken water marked the sunken pier; to starboard, the white seas burst at the slaty foot of the tree crowned bluff, and swept hissing up its ragged face as if to lave the leaves a hundred feet above them. Our sails swelled like balloons to the generous breeze, the sheets off to the last turn, but the Old Man, who had taken the wheel, had the same trouble as the Skipper.

"Give me every ounce of power that engine has got!" he roared, and the First Mate threw the throttle open until the roaring of the rapid explosions shook the whole ship. Just then the dinghy filled a second time, reared, and rolled over on its back like a dead whale.

The harbor gate looked like the narrowest corridor. The trees on the bluff seemed immediately above us. The seas that burst over the sunken pier and swept bodily at the struggling Girl forme snarled in our very ears as they hurled our little craft cliffwards till the backwash from the bluff threatened to land her quite on top of the submerged cribs. The foaming ship's speed seemed a tortoise crawl, the seconds of the passage, hours. Then, all at once, the sails flapped with the back-draught from the cliff, filled again gently, and then the creek banks began to slide by in orderly procession.

"Cut off the engine!" called the Old Man, a little hoarsely, "and stand by forward to let go."

The Skipper went to check the engine first.

"Say!" he gasped, "do you know what we've been doing the last half hour? The clutch has been reversed, someway or another, maybe by the big sea that parted the dinghy painter. The propeller has been backing on her against the sails. That's why she wouldn't steer!"

(To be continued.)

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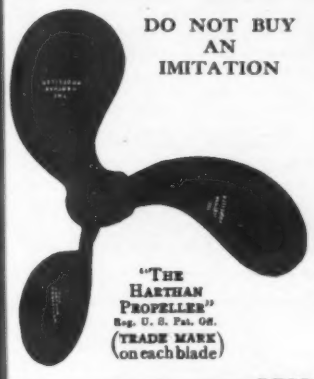

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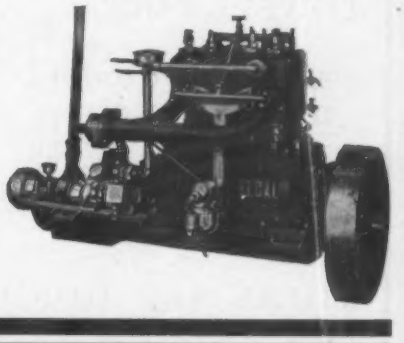

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The New York Yacht Club's Cruise to Maine

(Continued from page 295.)

first tack, Istalena led the fleet and thereafter was never headed.

After Sunday spent in port, the squadron started for Vineyard Haven on Monday. Light breezes characterized the greater part of the run, but it breezed on in good style when the yachts arrived near the finish line off West Chop buoy. Elmina won the race in the first division of schooners, finishing a minute astern of Queen, but taking the race on allowance. Polaris was the winner in the second division of sloops, Miladi in the second division of schooners and Istalena in the first division of sloops.

Next day came the run to Portland, with all the stirring events which we have attempted to describe. The winners in Friday's run to Rockland, nearly seventy miles from Portland, were Elmina, of the large schooners; Irolita, of the small; Aurora, of the large sloops, and Polaris, in the small-sloop division. The run was uninspiring and uninteresting because of haze and light winds. The last run of the cruise, that to Bar Harbor on Saturday morning, was also characterized by light winds. Elmina, Taormina, and the sloops Aurora and Adventuress, were the winners—the first important race, by the way, that Adventuress, a new Herreshoff forty-footer, had won.

Summed up, the successful schooner of the cruise was F. F. Brewster's Elmina, which, besides capturing the Astor cup, took also the Commodore's, Vice-Commodore's and Rear-Commodore's cups, as well as class prizes, and the Wacondah's cup, offered by Captain Hayden for first division schooners. Aurora won the Commodore's and Vice-Commodore's cups for sloops, and the Wacondah cup for first division sloops. Istalena won the greatest prize of all, the King's cup, and besides, took the Rear-Commodore's cup for sloops. In the second division of sloops, the yawl Polaris made by far the best showing, capturing the three flag officers' prizes and knocking Adventuress sky-high in contests for class prizes.

With the fleet reassembled in Bar Harbor, it was found that more than sixty yachts had come to time, and this was a showing to be proud of. Everyone was enthusiastic. On Saturday night the boats were illuminated, making a beautiful marine nocturne, and there were dinners and dances and other diversions. The regatta committee was the storm center of the enthusiasm. To them much of the success of the cruise was due. They had drummed up ebbing spirits, had fairly dragged yachts to the line that otherwise would have been missing from the cruise, had started regattas on time and conducted them without error—in fact, done everything that a competent regatta committee could possibly do.

And now it is Ho! for 1910, and a bigger, better cruise than ever.

The Lipton Cup Races on Lake Michigan

(Continued from page 290.)

it was hard to pick the leader. The six skippers started as pretty a luffing match as was ever seen in the endeavor to get the coveted windward position. After splitting tacks, Spray and I. A. C., accompanied by Jackson Park, took the starboard tack, while La Rita, Cherry Circle and Columbia held to port. Spray had the windward berth and I. A. C. tried in vain to work out from under her lee for about twenty minutes, when Peare came about on the port tack. When they converged Spray crossed I. A. C.'s bows easily, and so the

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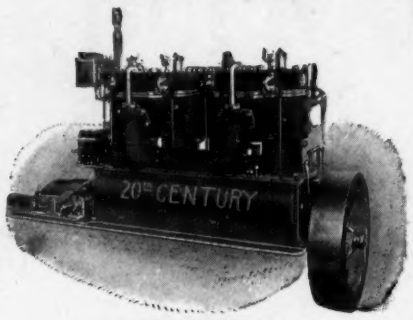

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battle went, I. A. C. showing a little faster i stays and gaining appreciably at every tack, a was evident when the space between them gre less and less as Spray crossed I. A. C.'s bows. A last Peare got Price where he thought he ha him, I. A. C. coming down on the starboard ta and it looked as though Spray would have to giv way or foul him. Price held on his course, how ever, and I. A. C. went under his stern, so clo that it seemed as though there might have been foul. After the race Peare claimed a foul, b the testimony was so conflicting that the judg decided there had been none and that Price wa within his rights by holding his course. Mea while La Rita was sailing a grand race und Skipper Barcal, and when the sextette neared th buoy it was discovered that she had a comfor able lead, swinging around by a good margin, fo lowed by Spray, I. A. C., Columbia, Jackson Pa and Cherry Circle. The rest of the fleet tried i vain to overcome Spray's lead and they sea-saw back and forth until the last leg, a reach, ga Price a slight margin and he shot his boat ov the line ahead of I. A. C. by ten seconds. La Ri was the actual winner of the race, finishing front, but Price had beaten Peare and that settl the Lipton Cup for 1909.

The final percentages on the series of thr races were as follows:

	First Race.	Second Race.	Third Race.	To
Spray	100.0	83.3	83.3	26
I. A. C.....	83.3	100.0	66.7	25
La Rita II...	50.0	66.7	100.0	21
Columbia	66.7	16.7	50.0	13
Jackson Park.	33.3	33.3	33.3	9
Cherry Circle.	16.7	50.0	16.7	8

German-American Sonder Races for 1909

(Continued from page 281.)

winded Ellen, who was following in her wa and forced Curtis to go about. When El tacked again Joyette also tacked, and after cro ing Ellen's bow she tacked again and gave h another dose of backwind. Thus it went to t windward mark, which the Bensonhurst l rounded 56 seconds ahead. It was a spinna run home; but as the wind hauled more to t westward Ellen took in hers and set a balloo only to shift back again later on, while Joy held on to her spinnaker. The Boston boat gai however, and as they swept down to the finish was only about 70 yards behind. The dista was too short, however, and Joyette flashed ac 21 seconds ahead, the winner of the hard-fou series. The elapsed times were: Joyette, 2:31 Ellen, 2:31:24.

As soon as the line was crossed the crew Joyette—Swan, Mower and Whiting—were s to hug each other in delight, while the attend fleet let loose its pent-up feelings in a din sel equaled off Marblehead.

The Draper Cup, offered by Governor Dra of Massachusetts, and sailed for on points, w to Ellen, and the bitterness of defeat was so what mitigated by this handsome trophy.

The following Thursday the owners and cr of the competing boats met the President at h on the yacht Mayflower, and the President hi self presented the cup that bears his name Commodore W. H. Childs, of the Bensonh Yacht Club, the owner of Joyette.

The races were held under the joint ausp of the Kaiserlicher Yacht Club, of Kiel, Germ and the Eastern Yacht Club, and it is largely to Mr. Henry Howard, of the latter club, international racing between boats of this c was inaugurated. Mr. Howard has been un ing in its efforts to make the event a success, the impetus to international racing and the g feeling that has been engendered will do m for the sport and for future international c tests.